MSZ 25 Model

Injection Blow Hollow Moulding Machine

OPERATION MANUAL

Jiangsu Victor Machinery Co.,Ltd.

CONTENTS

Welcome you to buy and use our Victor product.

Attention

1. Before operate the machine, read the manual carefully, please.
2. The operation must be carried out strictly according to the demands in the manual.
3. Operators must strictly obey the safety rules.
4. Because the product is being improved continuously, maybe, there is difference between the content in the manual and that in the original design, this will not affect the operation and using of the machine.
5. The maintenance of the machine must be carried out by professional personnel timely. It must be repaired by skilled professional technicians.

Caution

1. If the machine is not operated according to the program in the manual, the consumer will bear responsibility for any straight or indirect losses caused . The company will not shoulder the responsibility.
2. The company will not shoulder the responsibility for any injuries and deaths accident caused by operated the machine improperly.
3. In guarantee period, if the operators are disposed or have no intention to damage the machine or cause the machine not to work normally , the free guarantee will automatically lose efficacy. The fee caused by it will be undertaken by the consumer himself.

I. Summary

1. Usage:

The machine adopts injection blow moulding technology and once-moulding technology. It is a bottle blower of making hollow bottles. It can produce high grade bottle whose bottleneck has high precision. It is widely used manufacturing package bottles in pharmacy、food、cosmetics、chemical and other trades.

2. Composition:

The machine is composed of injection section, injection clamping moulding section, blow plastic clamping moulding section, rotary lifting section, stripping section, hydraulic control section, electric control section , blow control section and others. An air compressor and two mould temperature controllers must be bought by consumer or are equipped according to the contract.

3. Characteristics:

(1) It adopts a thermal flow system and high-pressure injection moulding to get high precision of bottlemouth, bottleneck and screw. The product has no seam and leftover bits and pieces. Save raw material. And the products have the same specification and their appearance is beautiful and smooth.

(2) The injection section adopts single-screw stem horizontal injection method. The clamping moulding section adopts horizontal three-work positions rotary device. It can one-mould multiple-chamber continuous production, it has high efficiency.

(3) High voltage locking mould adopts energy storing device , improve production efficiency and save energy source.

(4) It adopts auto stripping and auto flame treating and auto counting. Three sections are combined together to ensure the products not be polluted to meet the healthy demands of food and pharmacy trades.

(5) Adjust rings can be fixed in mechanical, hydraulic, air-control, electric and others to ensure the technological demands of different products.

(6) It has strong applicability to raw materials, it can use most of thermoplastic plastic.

(7) The machine has low-mould protection, proportion pressure, proportion flowing adjustment and other functions. It adopts advanced reliable hydraulic and electric components. It has hand-operated, semi-auto and auto operation.

(8) The production efficiency of the machine is high. Its noise is low and its power consumption is small, the operation is safe and convenient. It is an ideal equipment to produce package bottles for pharmacy, food and other trades.

II. Main Technological parameters

Main Technological Parameters Table of MSZ 25 Injection Blow Hollow Moulding machine

No	Name	Unit	Data	No.	Name	Unit	Data
1	screw stem diameter	mm	35	18	Stripping distance	mm	120
2	Length/diameter ratio of screw stem (L/D)		20	19	Mould size L ×W	mm	300x200
3	Max. theoretical injection capacity	cm^3	129	20	Min. mould thickness	mm	180
4	Injection volume	g	123	21	Main motor power	kw	15
5	Max. injection pressure	MPa	157	22	Mould heating power	kw	
6	Max. theoretical injection speed ratio	cm^3/sec.	60	23	Hydraulic system pressure	MPa	14
7	Max. distance of screw	mm	135	24	Lifting height of rotary table	mm	60
8	Twisting force of screw stem	kg.m	58.8	25	displacement of compressed air	M3/min	＞0.3
9	Rotary speed of screw stem	rpm	10-225	26	Pressure of compressed air system	MPa	1
10	Plasticizing capacity	g/s	12	27	Cooling consuming volume	M^3/h	0.5
11	Electric heating power of cylinder	kw	4.75	28	Overall size L× W× H	mm	3100x1100x2200
12	Electric heating control section	qty	3	29	Machine weight	T	
13	Injection clamping moulding	kn	280	30	Product scale	L	0.015-0.8
14	Opening distance of injection mould	mm	120	31	Product height	mm	≤200
15	Blow moulding	kn	30	32	Product diameter	mm	≤120
16	Opening distance of blow moulding	mm	120	33	Central height of core bar	mm	140
17	Unloading circle time	s	4	34			

III. Main Structure & Characteristics

MSZ25 Injection blow hollow moulding machine is composed of frame, injection device, clamping moulding device, injection blow rotary device, stripping device, hydraulic system, gas circuit system, electric control system and others.

1. Frame:

The frame is welded with shaped steel. It is an overall structure. The front side of the frame has some rigidity to ensure that it does not deform and ensure product quality. On it , the injection and the blow plastics clamping moulding devices ; the injection blow rotary device ,the stripping device and the gas circuit are fixed.

On the back side of the frame, jet plastics device is fixed. The oil tank is fixed on the low of the frame. Above the oil tank ,there is air filter, there is an oil exhausting hole (for washing the oil tank)in the low of the back side. The rear end of the frame , P/Q valve plate , motor, oil pump are fixed. In side space there is oil pipeline. The electric control cabinet is fixed in the front internal space of the frame.

2. Injection device:

The jet plastic device of the machine adopts double- cylinder jetting plastic structure. The jetting force is strong and even. It adopts low-speed large-twisting force hydraulic motor to drive the screw stem. The jetting plastic device is composed of cylinder, screw stem, hopper, jetting plastics, limit controller, screw stem rotary device, mobile cylinder of jet orifice and others. The specially designed screw stem makes plastics evenly melt into melted condition and jet the measured plastics into mould chamber at chosen pressure and speed through thermal current channel. The device melts plastics well and its measure is correct. It can get needed pressure and speed through proportion pressure and flow adjustment to be suitable to the demands of different resin kinds and different products.

The injection device has rotary device to be convenient in loading and unloading of screw stem and washing charging barrel.

The cylinder and the screw stem of the device both adopt high-quality nitrated steel. Its use-life is long. The non-return ring is fixed in the end of the screw stem to reduce the material flowing back along the screw stem. while injection.

3. Blow clamping moulding device

The device belong to hydraulic straight-pressing structure. It is composed of guide pillar, moving form board, supporting plate, lock-mould cylinder and others.

In order to improve productivity and reduce shocking, moving mould speed adopts slow-fast-slow program.

In order to meet the demand of large lock die force of injection plastics mould, on the upper of the injection clamping moulding cylinder there is a booster. After the two parts of the die are tightened, the limit switch sends a signal, the directional valve exchange it, the oil pump supplies oil to the upper chamber of the booster to make the piston of booster move down to increase pressure to reach the

demand of high-pressure lock mould. When injecting and blowing, the circuit of the energy storing device is jointed at the same time, supplement the leak of the oil circuit to ensure the pressure for locking mould.

The clamping mould device has low-pressure die protection function. When the two parts of die have not tightened, the lock mould cylinder will not enter the increasing-pressure and locking mould condition. If there is hard material in die chamber at this time, the die will not closes tightly. The electric control system will send alarm to make operators remove the trouble.

4. Injection blow rotary device:

It is mainly composed of dividing mechanism of lifting cylinder, turret, fork, roller, core axle and others. The mould core bar is installed horizontally into a straight line on the three sides of the turret at 60. The turret drives the core bar to lift---rotate at 120--- fall in turn, combining the injection, the blow and the stripping three technological processes together.

The lifting of the turret is finished by the lifting cylinder. The turret turning 120° is carried out by the dividing mechanism; the action exchanging is controlled by the limit switch.

The dividing position of the turret is first set primarily by the dividing mechanism, then the location pin fixes the precise position. The fixing position is accurate, reliable and use-life is long.

1. Stripping device

The stripping device is mainly composed of stripping pushing plate, stripping cylinder, pushing bottle and others. It is fixed on the table. It mainly strip the shaped product out of the mould core bar and turn 90° and push bottles to make a group of bottles rank orderly on the conveying belt and are treated with flame. At the same time, it finishes the processes, such as inside cooling of core bar, outside cooling of core bar and others.

Exchange the stripping pushing plate and adjust the primary position to be suitable to different specifications of bottles.

2. Safe door

A safe door is fixed on the table. It covers the clamping moulding device and the blow retary device and others to prevent flying substance from entering the mould chamber to ensure normal production and operator’s safety.

3. Hydraulic system

(1) It adopts high-characteristics, low noise vane pump to supply oil. YB-N46 wearproof hydraulic oil is introduced. The system work pressure is 14MPa, registered exhausting capacity of the pump is 53cm^3/rev.

(2) The schematic diagram of the hydraulic system refers to the attached drawing.

(3) The work pressure and flow of the hydraulic system is provided with proportion pressure, flow compound valve, Adjust the pressure and flow which the technology needs through adjusting the electric control. The detailed operation refers to the manual concerned about the electric appliance.

(4) The actions of the machine, such as injecting, blowing, opening and champing mould, preplasticizing, anti-leak, advancing and backing of the stand, lifting of the turret, resetting, rotating, rotating reset and others, are all controlled and driven by the hydraulic system. All of electromagnetic

valves are controlled by 24V DC.

(5) The clamping moulding circuit adopts two single-direction throttle valve to adjust the speed to make injecting, blowing two matching moulding cylinders carry out two-direction synchronization. It adopts differential circuit, boosting circuit and storage-energy circuit to reach saving energy result.

(6) it adopts sealed oil tank and absorbing filter to ensure the hydraulic oil which enters the pipeline clean to make the elements work reliable and the use life extends. Besides, an oil cooling device makes the oil temperature not surpass 50℃.

(7)The joints of the oil pipe adopts snap-ring cone seal. Its seal is reliable and assembling is convenient.

(8) There are 3 oil integrated circuit blocks in the hydraulic system. They are:

a. block for pressure flow valve ;
b. block for clamping moulding valve;
c. block for lifting, stripping and turning-up valve

4. Gas circuit system

(1) The gas circuit system is used for inside cooling of core bar, prejointing of inside cooling of core bar, prejointing of blowing, blowing and others. All of the electromagnetic valves adopt lubrication without oil to ensure the healthy demands.

(2) The schematic diagram of the gas circuit system refers to attached drawing " Schematic Diagram of Gas Circuit System".

Cooling system:

The need cooling sections of the machine: 1. Oil cooler of the hydraulic system; 2. the cylinder filling port cooling of injection device; 3. mould temperature controller;4. blowing moulding. Among them, 1,2,3 terms can adopt deep-well water or cooled water (water temperature is about 20℃); No. 4 adopts cooled water (about 10 ℃).

5. Electric control system

It is composed of control cabinet, operation casing and electric control device of conveying belt (be ordered separately) and others. The 3-phase 4-wire 380V power is transported to the control cabinet, mould temperature controller and control casing of conveying belt. The control cabinet is composed of injection temperature control device, work circle of the whole machine and control device.

The injection temperature control device is composed of front, middle and rear sections heating of charging barrel , jet orifice heating and thermal flow channel heating. The front, middle and rear sections heating and thermal flow channel heating adopt four temperature controllers control separately the four contactors . The contactors control heating ring of changing barrel to ensure the need temperature of the charging barrel. The jet orifice adopts a thermostat to keep its need temperature.

The machine has hand-operated , semi-auto and full-auto three operation methods. The hand operated function is finished separately with operation buttons and control buttons. In order to be convenient in adjusting the machine and meet the demand of the technology. Please refer to the schematic circuit.

Before the auto circle begins, the machine must keep in the lifting position of the turret. And the

injection blow lock moulding devices are all in opening condition. After the safe door is closed, the full-auto circle starts. If the auto circle is stopped, push the stop button.

If semi- auto operation is chosen, push button S47. After the machine finishes a work circle , it will auto stop. If it need another work circle, push the semi-auto button again.

10. Conveying device:

It adopts conveying belt to make the products rank orderly on the conveying belt. The products are treated with flame and other back processes to make the products meet various standards. The automatic level of the production line is higher and improve the production efficiency.

IV. Hoisting & Installation

1. Hoisting:

The machine weight is about 4 tons. When hoisting, soft washers must be put between the turning point of the sling rope and the place which touches the machine. When the machine is carried , prevent from shocking, fierce shocking or excessive lean as less as possible.

2. Installing

(1) Base:

The machine is normally put on the pre-built base, it can be installed on a normal shockingproofer. The frame has ground bolt holes for fixing the machine or installing shockingproofers.

Notice: When the base is prepared, the pipeline channel must be arranged.

(2) Fixing and Adjusting:

After the machine is put on the base or shockingproofers, the horizontal check must be carried out. Using the work table and the work layer of injection device as the base, adopt level to check the cross and longitudinal level of the machine. The levelness is 0.1/1000mm/mm.

(3) Electric power joint

It adopts 3 phase 380V, 50Hz AC power.

The wires of the machine adopts larger than 25mm^2 copper wire. While jointing, joint the power cable with the terminal board in the electric control cabinet. The schematic circuit refers to “ Schematic Circuit”.

(4) Cooling water pipe diameter

The jointing cooling pipe must have enough section and lay the pipes as largest slope as possible.

The general inlet and outlet of the water cooling system are equipped with a control valve separately by the user. The min. inlet diameter is 1”.

V. Operation

1. Preparation before the machines starts:

Before operate the machine, operators must learn the machine structure, control element function, and work principle of each action , hydraulic schematic diagram , schematic circuit to ensure operator's safety and ensure the machine to work normally and avoid damaging the machine.

(1) Check whether all of buttons , operation handles, switches are damaged or not and make them be in Off position.

(2)According to electric system demands, joint the power, the used voltage must be equal to the registered one.

(3) Check whether screws, oil pipes and limit switches are loose or not.

(4) All of lubricating sites must be lubricated.

(5) Fill oil into the oil tank and check the oil level.

(6)Check whether all of jointing are reliable and correct, particularly, notice the oil pump can not run anticlockwise.

(7) Joint cooling water and gas pipeline, check whether all of pipe joints are leak or not.

(8) Preheat the cylinder, prevent the screw stem from starting in coolness.

(9) Fill nitrogen into energy storing device, the basic pressure 12MPa (before it is carried out of the factory, it is filled).

(10) Check whether there is foreign substance in hopper.

(11) According to the technological demands, adjust the time relay, limit switch and temperature controller and set the pressure and flow of each section.

Alarm:

Hydraulic oil, lubrication and gas source demands:

Screw off the cover of air filter, fill filtered hydraulic oil whose model is set, to the oil level, isn't lower than 3/4 of the oil level.

The work temperature of the hydraulic oil is normally 40-50℃, the lowest one can not be lower than 20℃, the highest one can not surpass 50℃. It must be exchanged regularly according to the rule.

All of moving parts must be lubricated timely and often check them.

The entering gas source must be compressed air which is got ride of dust, water and oily fog. Its total containing content must be $<$ 10mg/m^3, dust content $\leqslant$ 5μm, air pressure 1.5MPa, gas supplying $\geqslant$ 0.3m^3/min (Notice: the gas source is solved by the consumers according to the demands. Combining the detail condition of the enterprise. The consumers also buy air compressor without oil, gas storing tank, air drier, filter and others. Refers to attached drawing 2, Schematic Diagram of Gas Circuit System)

Notice:

(1) The set brand hydraulic oil must be used . It must be worked in ruled oil temperature . It must not be polluted, especially, forbid water from permeating.

(2) The hydraulic oil rule refers to " Using Oil" Chapter.

(3) Regularly exchanging oil refers to " Exchanging oil " Chapter.

The lubrication of all of sections refers to "Lubrication" Chapter.

2.Operation & Using:

The operators must read and learn the manual, learn the machine structure, hydraulic system principle, gas circuit principle, electric control principle and the functions of all of switches and buttons before the machine is operated.

Hand-operated:

Refer to Attached Drawing 1: Schematic Diagram of Hydraulic System; Attached Drawing 3: Schematic Circuit.

Adjust the temperature , time and limit switch and set pressure, speed of all of actions with hand. After the hand-operated is normal, the machine can be transferred into semi-auto or auto operation.

In the operation process, once action of all of switches (except for power、electric heating cylinder、motor switches)is finished, they must be turned back to middle position or OFF position.

A. Fill mixed materials into the hopper, close the hopper cover.
B. Turn all of action switches to the middle position or OFF position.
C. Turn General Power Switch to ON position, and turn the Power Switch to ON position.
D. Dial the digit and input proper time、pressure 、speed values of each action.
E. Adjust the cyli8nder temperature controller and thermal flow channel and others to proper temperature value.
F. Turn the Operation Choice Switch to Hand-Operated position.
G. Push the start button of the motor to start the motor (the rotating direction of the motor must be correct. If it is anticlockwise, push the stop button at once and exchange the power wire's phase)
H. Turn the jetting plastics switch to Jetting position, the screw stem will advance (Notice: If the green lamp of temperature controller does not light, it suggests that the cylinder temperature does not reach the set one or the plastics in it does not melt completely. Forbid jetting 、melting and other action.
I. Open the gate valve of the hopper.
J. Adjust the limit switch of the screw stem, adjust the back limit of the screw stem and adjust the jetting plastic volume.
K. Turn the Jetting Switch to Melting position, the screw stem rotates and backs to store material for cylinder.
L. Turn the Jetting Switch to Jetting position and jet out of the melted plastics to make "leaving mould jetting test". Notice: the oil pressure can not be too high (not higher than 30kg/cm^3 or 20% value pressure) to avoid melted material from spraying and harm persons. After the test, turn the Jetting switch to Melting position to make the cylinder store materials again.
M. Turn the Jet Orifice switch to In Front of Jet Orifice to make the jet orifice touch the

mould mouth and adjust the Limit Switch of Jet Orifice and adjust the limit of front and rear jet orifice (It is effective when the jet limit switch is in semi-auto or full-auto position).

N. Close the safe door, turn the button of “rotary table fall” to make the rotary table fall, then turn the button “ Clamping Moulding” to make the mould close.

O. Turn the button of Jetting Plastics to Jetting position to jet the melted material into the mould.

P. Turn the button of Jetting Plastics to Melt Plastic to make the cylinder store material again. At the same time, turn the buttons in turn: Blowing Plastics; Pre-supplying high pressured gas; stripping ; inside cooling of core bar, mould backing.

Q. After the cooling time is over, turn the button of opening mould to open the mould.

R. Turn the lifting button of the rotary table to make the rotary table lift.

S. Turn the rotary button of the rotary table to make the rotary table rotate 120°.

T. Turn the falling button of the rotary table to make the rotary table fall to the position.

U. Turn the returning button of the rotary table to make the fork reset.

V. Repeat the actions from N to V, adjust the jetting plastics volume and jetting pressure till the product passes the inspection.

Semi-auto operation, auto operation:

(1) Semi-auto operation:

Semi-auto operation is started at the beginning of closing the safe door and the rotary table falling and the rotary table lifts and rotates. Thus, a semi-auto operation is finished.

After the hand-operation, adjust the time of various actions, then turn the choice switch to the “semi-auto” position (the other operations are not changed.) Press the button of Start, the machine will finish the actions from the rotary tower falling, champing mould, injection, keeping pressure, blowing plastics, pre-plasticizing, anti-transpiration, cooling, stripping, opening mould, the rotary tower lifting, rotating position and others. After a circle is finished, press the button of Semi-auto again, the machine will start the next circle. Normally it is used in the period of the machine running without loading, trying running and the production starting.

(2) Full-auto operation:

After the machine is operated with semi-auto, the other operation programs are not changed. Turn the switch of the choice to “auto” position, press the button Start, the machine will continuously and circularly automatically finish the technological process and various actions according to the chosen program. If the machine is to be stopped, press the button of Stop, the machine will automatically stop and return the start position after it finishes the circle.

3. Try running without loading:

(1) Joint the power, start the motor and the oil pump, check the rotary direction of the motor is correct. The oil pump must run without loading for over 5 minutes. If the machine is started first or it is reused after it is stopped for a long time, the pump bearing must be turned over ten circles before the machine is started to make the inside of the oil pump lubricating.

(2) Open the cut-off valve of cooling water to cool the returned oil to avoid the oil temperature too high.

(3) The pressure of hydraulic system is 14MPa. It is adjusted before the machine is carried out of the factory. The user need not adjust it. If it need adjusting, please consult our factory.

(4) The allowable adjusting pressure and flow capacity are set with the external equipment.

(5) The trial run adopts hand-operation method to check all of actions are normal.

(6) Semi-auto operation is carried out.

(7) Full-auto operation is carried out.

(8) When the machine is running, maybe the crawl condition or hitting sound will produce because there is air in the hydraulic system. After it runs for several times, the air in the oil circuit is exhausted, the above conditions will disappear. If it is not normal yet, the farther checking will need. After the trouble is removed, the machine will be tried run again.

4. Trial run with loading:

No. 1 Installing of mould

(1) In the process of installing the mould, only hand-operation method is permitted.

(2) When the mould is installed, pay specially attention to safety and protect the operators, machine and moulds. The operation steps as follow:

A. Press the button of the hand-operation to make the closing-mould device in opening state, the rotary tower lifts to the highest position, the injection stand backs to the final position. When it is necessary, the rotation is permitted.

B. Clean the work table、 mould coupling plate and mould、the outside surface of the upper and the lower mould frame with light oil and rag. On the touching section between the work table and the mould frame a little 30# mechanical oil is added and painted even.

C. The mould must be pushed into the work table horizontally. Forbid it falling into the work table. The mould is pushed into the positioning key . Notice that the mould is not hit with the spray jet hopper.

D. Make the mould move ahead to press tightly the adjustable washer.

E. First fix the mould frame on the work table with the screw pressure plate, then operate the champing mould (Notice that the increasing pressure oil circuit is not jointed. Fix the upper mould frame is fixed on the mould coupling plate, then open the champing mould device again.)

F. Check mould core pushing plate inside the rotary tower is smooth, then on a side of the rotary tower a group of mould core bar is fixed, turn the group of mould core bar to the injecting position, press the inching switch to make the rotary tower fall inchingly till the mould core bar bear the injecting mould. Watch the core bar is properly in the neck ring of injecting mould. If it is not suitable, loose the fixed screws of upper and lower mould to exchange the adjustable ring of the front end of the mould , finely adjust the mould position to make it match the core bar position. After it is fixed, tighten the upper and lower mould frames again.

G. Lift the rotary tower to turn the group of core bar to the blowing plastics work position. Adjust the blowing plastics position with the above method, at last fix the upper and the lower mould frames with screws.

H. Lift the rotary tower to make the group of core bar reach the stripping position, install the knockout plate. Adjust the knockout plate position with the above same method to make the core bar fall into the stripping plates properly, then it is fixed with screws.

I. After the two moulds and the stripping device are fixed their positions, the another two groups of mould core bar can be installed. First install the second group of core bar. Check if they are clamping correctly with the mould and the stripping. After the second one is checked, the third group of core bar is installed. It is also checked after it is installed.

J. According to the demands, joint the cooling water pipelines of mould, mould temperature control circuit, thermal heating pipes, install thermal coupling, check whether the water pipe and oil pipe and wires are touch the mould core bar. The joint wires must be safe.

K. Adjust the limit position of injection position to make the spray jet touch properly the thermal flow plate. Adjust the center of spray jet to aim at the center of the thermal flow each other to avoid leaking.

No. 2 According to the product characteristics and the technological demands, adjust the actions of various devices and the technological parameters.

A. According to the function table, adjust the limit switch positions which need adjust.

B. According to the conditions of technology, adjust the technological time.

C. According to the code operation panel, adjust the pressure and speed.

D. According to the technological demands, adjust the set values of temperature controller. Notice that the charging barrel must be heated to the set temperature and keep it for some time (at least 15 minutes to ensure the material melt completely.) The pre-plasticizing action can be operated. (The charging barrel is heated , normally in the first section the temperature is higher, in the middle section, it is lower, the last one near the discharging port is more lower.)

No. 3 When the machine is tried run primarily, it had better put polystyrene into the hopper. After the pre-plasticizing is normal, the plastics material which the product demands is fed into the filling port. The heating temperature must be adjusted according to different plastics.

No.4 When it is tried run primarily, the spray jet is put away the mould and injet plastics outside the mould with hand. After it is normal, the injection inside the mould can be carried out.

No.5. After the mould core bar is preheated properly, the semi-auto operation is carried out.When the quality of the product is not satisfied, adjust the parameters properly till it can produce OK products. Then full-auto operation can be carried out.

5. Trouble Alarm:

When a trouble happens in the machine, alarm sign will send and display. The machinewill return the start condition of circle and stop circle.

(1) When there is foreign substance in the mould chamber, the low-pressure mould protection surpass the set time;

(2) The rotary tower falling surpass the set time;

(3) When the full- auto operation is carried out, a circle time surpasses the set time.

6. Stopping Machine Operation:

It is normally divided into normal stop and emergency stop.

(1) Normal stop:

A. Close the gate plate of hopper and go on injetting till all of the plastics in hopper is injected .

B. After the last circle ends, turn the choice switch to the hand-operation position.

C. Turn all of the directing switches to the OFF position, stop the motor of oil pump running.

D. Turn off the general power switch.

(2) Emergency Stop

When the machine need emergency stop, press the button of emergency stop, the motor of oil pump will stop running at once.

7. Attention:

(1) Forbid metal or any foreign substance are mixed and enter the hopper.

(2) When spray jet is blocked, disassemble it and clean it. Don't adopt increasing injection pressure to get ride of blocked material.

(3) When the material is pre-plasticized, the screw stem rotates, but the material can not enter , the action must be stopped at once , look for the cause and remove it. Then heat pre-plasticizing. If heating is not proper to make the materials in the filling section of the screw stem form caking, the screw stem must be disassembled and be cleaned , then it is assembled again. The temperature is adjusted again, then trial run is carried out again.

(4) When it is tried running, the injecting pressure must be adjusted from the low to the high. Forbid adjusting at will.

(5) When the machine is not used, the general power must be cut off. All of operation buttons on the panel and main directing switch must be on OFF positions.

(6) Except filling material, the hopper cover must be covered in normal time.

(7) When working, the motor temperature can not surpass 75℃, otherwise, the machine must be stopped for checking.

(8) Cooling water must adopt cleaning fresh water. If the river water is used, it must be filtered.

(9) The machine must be earthed reliably to avoid any accidents.

(10) There are many causes that the product produces raw edge, such as the mould plane is not level. the injecting pressure is too large and others. It must be solved in an all-round way.

(11) Before the machine is started, all of parts must be checked .No parts are loosened or out of order. When the machine is running, don't stretch the hand between the moving parts. Don't get ride of melted plastics with hand.

6. Maintenance of the Machine:

Only according to the rule , maintain the machine, the machine can work normally , steadily and

reliably. Fewer troubles happen .Every day, the dirt on the machine must be mopped. It is washed regularly and carefully. Forbid various substances being piled up in the front of the electric control cabinet. Pay specially attention of dust and grains affecting and damaging electric elements and hydraulic elements and all of moving parts.

(1) Oil changing:

After the machine runs fro 2000 hours, the hydraulic oil in the oil tank must first be exchanged. While it is exchanged, the oil tank must be washed carefully. Later, the oil is exchanged once every 6000 hours.

Notice: the added oil must be the same kind of hydraulic oil. Don't mix several oils together.

(2) Lubrication

In order to ensure all of moving sections of the machine run normally, the lubricating points are fixed in all of main moving parts. Fill the lubricant or grease with an oil gun. Please lubricant and maintain according to the following :

A. Grease filling holes: once every day;

B. Before work of each shift, the moving sections of the machine must be lubricated.

(3) Oil

Using Position	Oil Name	Introduced Oil Code	Remark
Oil tank	Wear-resistant hydraulic oil	YB-N46	Moving viscosity at 50 ℃(Cat) 28-32
Moving section	Normal mechanical oil	40# mechanical oil	
Oil gun	grease		

(4) Disassembling and washing cylinder and screw stem

Before disassembling the screw stem, first close the filling port, heat the cylinder to make the remained plastics in the cylinder melt, then inject the melted plastics in the cylinder completely.

The operation process of disassembling the screw stem as follow:

A. push the screw stem to the front end position (to the end) again and again to make the material in the cylinder be injected completely.

B. The injecting device backs to the end;

C. Loosen the jointing screws of the injection device.

D. Rotate the injecting device;

E. Loosen the collar bush jointing the screw stem and transmission bearing.

F. Disassemble filling port and heating cylinder.

G. While the material is in hot melted state, draw the screw stem out (If it is difficult to draw the screw stem straight, put something under the back end of the screw stem , then make the injection action to push the screw stem. Notice use the injecting pressure which is lower than 1okg/cm^2.

(5) Others:

A. Keep the machine cleaning, make maintenance regularly. Worn parts must be repaired or exchanged in time.

B. Pay attention of moisture-proof or anti-heat of the electric control cabinet to ensure the machine runs normally.

C. Pay attention to supplying of cooling water to ensure the hydraulic temperature not surpass 50℃. Otherwise, the oil is easy to go bad and the airtight packing is easy to be damaged.

D. The oil cooler is washed once every 3-6 months.

Normal Troubles & Removal

Trouble	Cause	Removal
Oil temperature is high	Inlet volume of oil cooler is small.	Enlarge the inlet volume
Pressure in oil cylinder is not enough.	The airtight packing is worn and aged	Exchange it.
The product is not complete and the material overflows.	The thermal flow channel and the spray jet center are not in the same axle.	1. Check whether the thermal flow channel center meets the demand. 2. adjust the spray jet center.
The moving parts are not harmonious.	All of pilot sleeves are galled or worn.	1. Exchange the pilot sleeves 2. Add lubricant or grease on the moving parts
Melting plastics is difficult.	1. The back pressure is too high. 2. The oil pressure for melting plastics is lower.	1. adjust the back pressure according to the melting technology. 2. adjust the oil pressure for pre-melting plastics.
The oil joints leak.	The jointing nut loosens.	Screw tightly it.
The valve plate seepage appears.	1. The joint nut of valve, flange loosens. 2. The airtight packing is aged.	1. screw tightly the nut. 2. exchange the airtight packing.
The electromagnetic iron action is out of order.	1. Dust entering 2. Wire joint loosens. 3. The coil is damaged.	1. Wash the electromagnetic valve. 2. Tighten the wire joint. 3. Exchange the coil.
The limit switch is out of order.	1. The fixed screws loosens and the contact is not good. 2. Spring or wiring loosens.	1. Adjust the contact position and fix it. 2. Exchange spring or tighten the wiring.
The noise of the oil pump is unusual.	1. The filter is blocked. 2. The oil absorbing pipe leaks. 3. The hydraulic oil becomes bad. 4. 4, The pump is bad.	1. Wash and exchange oil filter. 2. tighten the ring of oil absorbing pipe. 3. Exchange hydraulic oil. 4. exchange the pump.
The motor of oil pump can not start.	The auto switch trips.	Check the power system. If OK, close it.
The cylinder temperature can’t reach the set value.	1. Heating cylinder is damaged. 2. The auto switch trips. 3. The temperature controller is out of order.	1. Exchange heating pipe. 2. Check heating mouth is earthed or not, close the auto valve. 3. Exchange the temperature controller.

Table 1. Hydraulic Component Table

No.	Name	Specification	Quantity
1	One-way valve	CIT-06-50-50	1
2	Hydraulic control one-way valve	CPG-06-E-04-50	2
3	Hydraulic control one-way valve	CPG-03-04-05	1
4	Additive Liquid Control One-Way Valve	MPA-01-04-04	1
5	Proportion speed adjusting overflow valve	EFBG-03-125-C-50	1
6	One-way throttle valve	MSW-01-Y-30	4
7	One-way throttle valve	9F1200SF	3
8	Throttle valve	MSP-01-30	1
9	Electromagnetic diverter valve	DSG-01-2B2-D24-50	1
10	Electromagnetic diverter valve	DSG-01-3C4-D24-50	2
11	Electromagnetic diverter valve	DSG-03-2B2-D24-50	2
12	Electromagnetic diverter valve	DSG-03-3C4-D24-50	1
13	Electromagnetic diverter valve	DSG-01-3C2-D24-50	2
14	Electromagnetic diverter valve	DSG-01-3C40-D24-50	1
15	Electromagnetic diverter valve	DSG-03-3C2-D24-50	1
16	Pressure Release Valve	MPR-01-B-03	2
17	Oil pump	PV2R2-53-F-R-AA-40	1
18	Pressure relay	JT-02-350-10	1
19	Air filter	AB1163	1
20	Oil cooler	DT-411	1
21	Absorbing oil filter	W12	1
22	Oil temperature/ Oil volume meter	LS-7	1
23	Pressure gauge	LB-250 LA-500	1 1
24	Energy storage device	NXQI-L16/31.5H	1

MSZ25 pneumatic component

序号	名称	型号	数量	用途	产地
1	Switch valve	HE-D-MINI	1		FESTO
2	Filter pressure release valve	LFR-1/4-D-MINI	1		FESTO
3	Pressure release valve	LR-1/4-D-MINI	1		FESTO
4	Pressure measure	MA-50-10-1/4-EN	2		FESTO
5	Electromagnetic valve	MN1H-5/2-D-1-C	5		FESTO
6	Base frame	NAVW-1/4-1-ISO	5		FESTO
7	Pressure release plate	LR-ZP-P-1	1		FESTO
8	End-plate (left and right part)	NEV-1DA/DB-ISO	1		FESTO
9	Magnet coil	MSN1G-24V-DC	5		FESTO
10	Plug socket	MSSD-C	5		FESTO
11	Casing cap	NSC-1/4-1-ISO	1		FESTO
12	Casing cap	B-3/8	1		FESTO
13	Casing cap	B-1/4	5		FESTO
14	Quick exhaust valve	VSC-544-1/4	1		Kangmaoshen
15	Muffler	2901-1/4-22	1		Kangmaoshen
16	Pipe junction	1500-10/8-3/8	6		Kangmaoshen
17	Pipe junction	1500-10/8-1/4	3		Kangmaoshen
18	Pipe junction	1510-10/8-1/4	8		Kangmaoshen
19	Conduit junction	2500-1/4	1		Kangmaoshen
20	Conduit junction	1420-10/8-1/4	1		Kangmaoshen
21	10/8 plastic gas pipe		3.5m		Kangmaoshen

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Table 3. Rubber Pipe Table of MSZ 25 Hollowing Machine

No	Joint & Installing Angle	Specification	Quantity	Total Quantity	Remark
1	$90H_2$ 90° $90H_2$	25/4D-1000	1		Oil pump to PQ valve plate G1”
2	$90H_2$ H_2	25/4D-1000	1		Oil pump to injecting mould G1”
3	$90H_2$ H_2	19III-1000	1		To turning-up valve plate G3/4”
4	$90H_2$ 0° $90H_2$	10II-1600	1		Stand moving G3/8”
5	$90H_2$ 0° $90H_2$	19III-2200	1		Stand moving G3/8”
6	$90H_2$ 0° $90H_2$	19III-1530	1		Injecting plastics G3/4”
7	$90H_2$ 0° $90H_2$	19III-1160	1		Pre-plasticizing G3/4”
8	$90H_2$ 0° $90H_2$	19III-1840	1		Backing stem G 3/4”
9	$90H_2$ 0° $90H_2$	19III-1120	1		Recovering material G3/4”
10	H_2 H_2	10II-1500S	3		Stripping G3/8”
11	$90H_2$ H_2	13II-800S	2		Lifting cylinder G1/2”
12	H_2 90 H_2	10II-800S	2		Rotating G3/8”
13	$90H_2$ 90° $90H_2$	13II-800	1		Energy storage device
14	$90H_2$ H_2	19III-600	1		Injecting opening mould G3/4”
15	H_2 H_2	10II-500	2		Increasing pressure G3/8”
16	$90H_2$ 90° $90H_2$	13II-850	1		Blowing & opening mould G1/2”
17	$90H_2$ 90° $90H_2$	13II-800	1		Blowing & champing mould G1/2”
18	$90H_2$ 90° $90H_2$	32I-1000	1		PQ to cooler G1 1/4”
19	$90H_2$ H_2	10II-1500S	1		Stripping G3/8”
20	$90H_2$ 270° $90H_2$	32 I-1200	1		Injecting valve plate oil returning G3/4”
21	$90H_2$ H_2	19 I-800	1		Turning-up valve plate oil returning G3/4”
22	C C	12/2S-4000	4		Mould temperature controller
23	HFK_2-P_3-3-P-2000		1		Pressure gauge
24	Pipe junction	2TB-12	1		Injecting champing mould

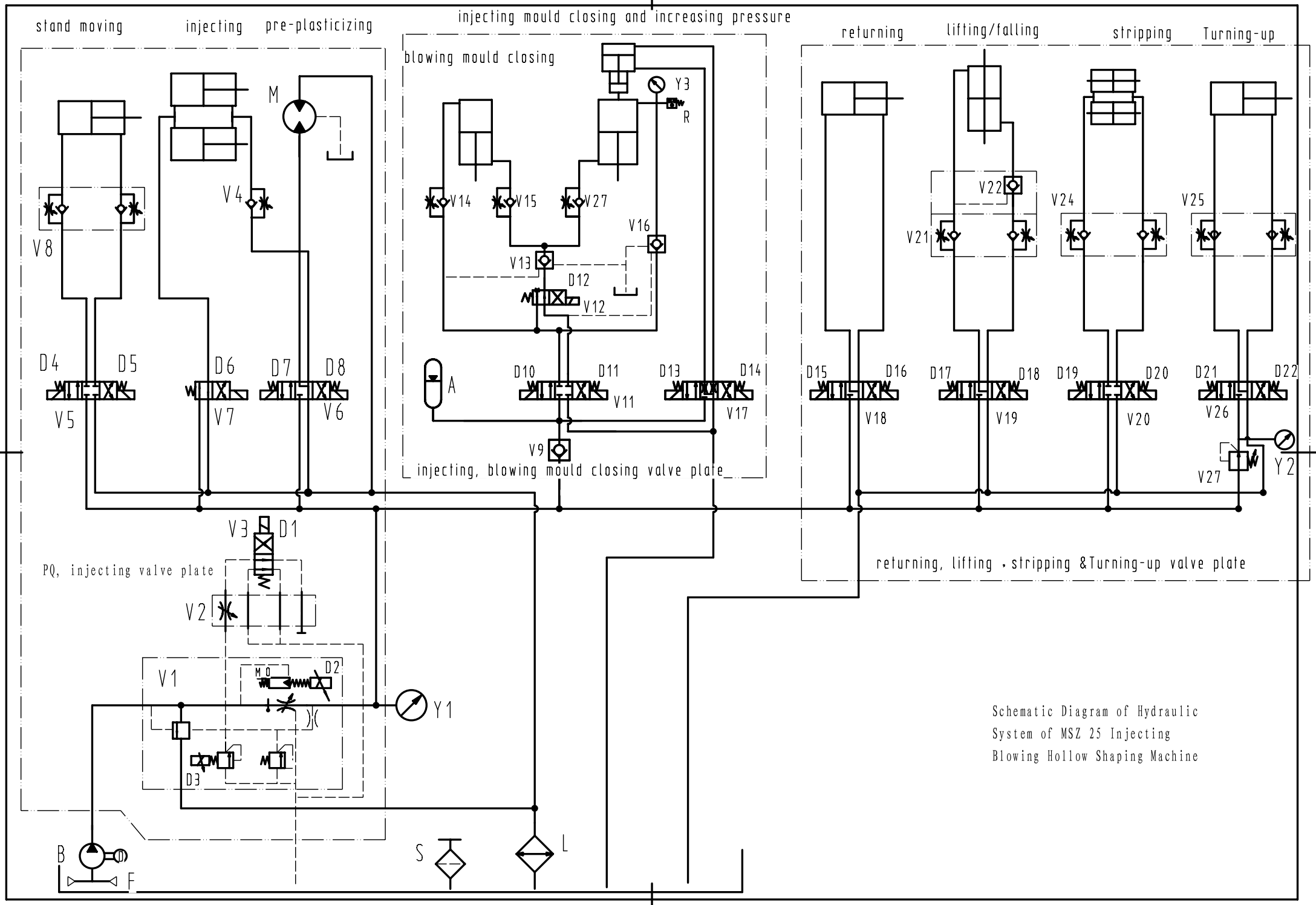
Table **4.** **Airtight Packing Table**

No.	Name	Specification	Quant	Remark
1	Airtight Packing	G105×3.1	2	Cylinder of pressure cylinder
2	Airtight Packing	G75×3.1	1	Cover of pressure cylinder
3	Airtight Packing	KDAS 055-039	1	Piston of pressure cylinder
4	Airtight Packing	G25×3.1	1	Piston rod of pressure cylinder
5	Airtight Packing	UHP80×71×6.5	2	Piston of pressure cylinder
6				
7	Airtight Packing	P120×5.7	1	Guide shell of injection cylinder
8	Airtight Packing	UHS90×105×9	1	Guide shell of injection cylinder
9	Airtight Packing	KDAS 110-085	1	Piston rod of injection cylinder
10	Antidust loop	DHS90×100×6×8	1	Guide shell of injection cylinder
11				
12	Airtight Packing	G55×3.1	2	Guide shell of blow moulding cylinder, cover
13	Airtight Packing	UHS35.5×45×6	1	Guide shell of blow moulding cylinder
14	Airtight Packing	UHP63×53×6.5	2	Piston of blow moulding cylinder
15	Airtight Packing	P20×2.4	1	Piston rod of blow moulding cylinder
16	Antidust loop	DHS35.5×43.5×6.5	1	Guide shell of blow moulding cylinder
17				
18	Airtight Packing	G90×3.1	2	Cover of lifting cylinder
19	Airtight Packing	UNS53×73×12	2	Cover of lifting cylinder
20	Airtight Packing	UHP80×71×6.5	2	Piston rod of lifting cylinder
21	Airtight Packing	P5×1.9	4	Adjusting valve core of lifting cylinder
22	Antidust loop	DHS53×61×6.5×5	2	Guide shell of lifting cylinder
23	Airtight Packing	UNS16×26×8	1	Cover of rotating cylinder
24	Airtight Packing	G35×3.1	2	Cover of rotating cylinder
25	Airtight Packing	P5×1.98296733	2	Adjusting valve core of rotating cylinder
26	Airtight Packing	UHP40×30×6.5	2	Piston of lifting cylinder
27				
28	O-shaped loop	P26×3.5	4	Cover of stripping cylinder
29	O-shaped loop	P12×2.4	2	Piston rod of stripping cylinder

30	Airtight Packing	UN18×28×6	2	Cover of stripping cylinder
31	Antidust loop	DHS18×26×6×4.5	2	Cover of stripping cylinder
32	Airtight Packing	UN24×32×7	4	Piston of stripping cylinder
33	Antidust loop	DHS35×43×6.5×5	2	Dust proof cover of guide shell
35	O-shaped loop	P26×3.5	1	Cover of turn-up cylinder
36	O-shaped loop	P20×2.4	1	Piston of turn-up cylinder
37	Airtight Packing	UN20×28×5	1	Cover of turn-up cylinder
38				
39	Airtight Packing	G40×3.1	4	Oil pump
40	Airtight Packing	G25×3.1	2	Oil pump
41	Airtight Packing	FBS14.8×2.5-1200		Injection, blow moulding, lifting cylinder
42	Airtight Packing	P16×2.4	6	Small piston of cylinder
43	Airtight Packing	P20×2.4	4	Shift sleeve of air pipeline
44	Airtight Packing	P12.5×2.4	4	Shift sleeve of air pipeline
45	Airtight Packing	P15×2.4	3	Installation plate of mould core
46				
47	Rotary oil seal	PD125×100×2	1	Drive shaft of screw stem
48	O-shaped loop	G90×3.1	4	Injection cylinder
49	O-shaped loop	G50×3.1	4	Injection cylinder
50	O-shaped loop	G25×3.1	4	Injection cylinder
51	O-shaped loop	P29×3.1	2	Injection cylinder
52	Antidust loop	DHS35×43×6.5×5	2	Injection cylinder
53	Airtight Packing	UHS35×45×6	2	Injection cylinder
54	Airtight Packing	UHS80×90×6	4	Injection cylinder
55	O-shaped loop	P30×3.1	1	Jet cylinder
56	O-shaped loop	P63×3.1	2	Jet cylinder
57	Airtight Packing	UHS35×45×6	1	Jet cylinder
58	Airtight Packing	UHS53×63×6	2	Jet cylinder
59	O-shaped loop	G50×3.1	1	Jet cylinder
60	Antidust loop	DHS35×43×6.5×5	1	Jet cylinder

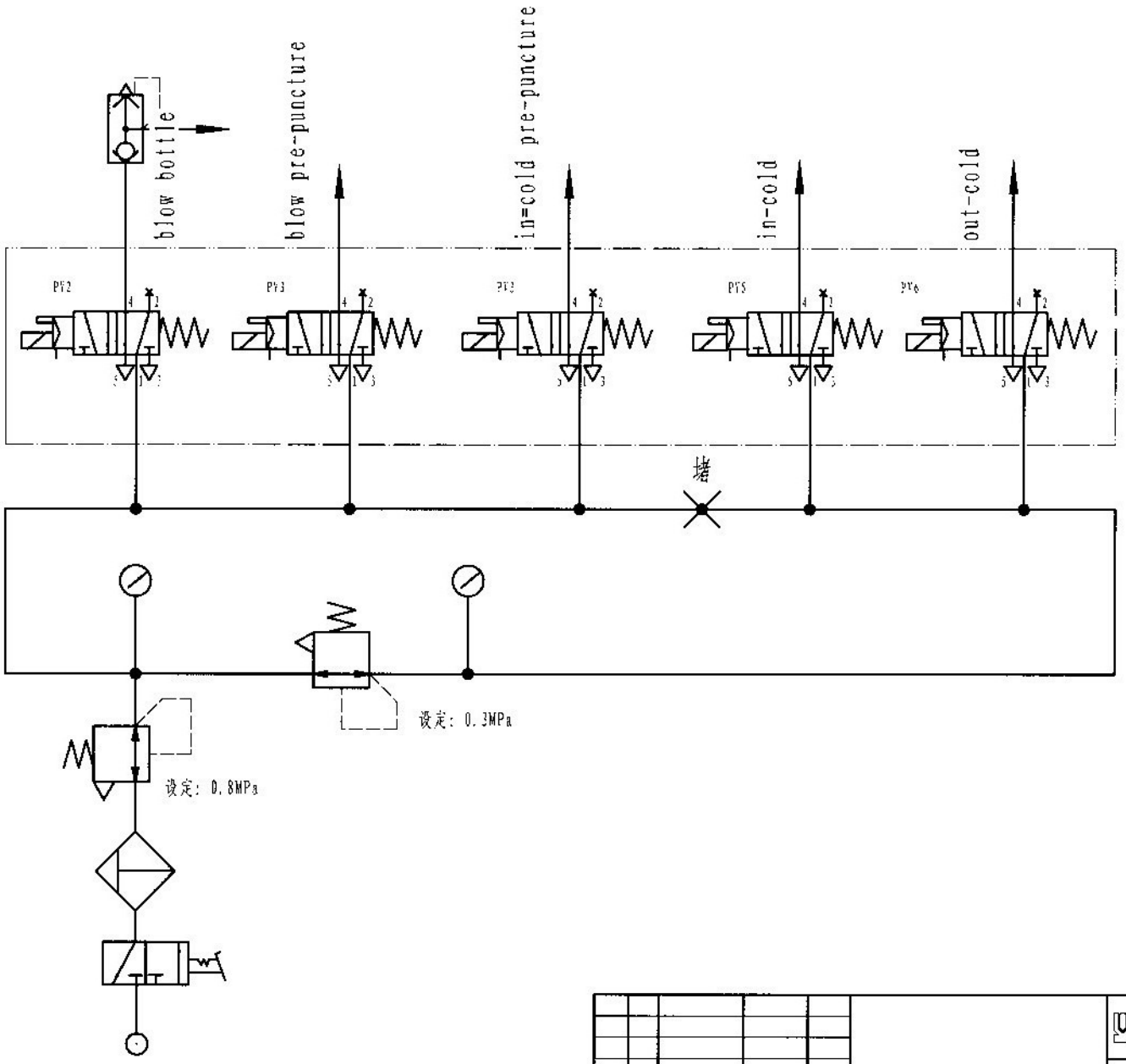
Table 5. Hydraulic System Action Table

No.	Electromagnetic iron / action	D1 Mould protection pressure	D2 Proportion flow	D3 Proportion pressure	D4 Stand back	D5 Stand advance	D6 Anti-overflowing	D7 Pre-plasticizing	D8 injecting	D10 Clamping mould	D11 Opening mould	D12 Fast clamping mould	D13 Increasing pressure preparing	D14 Increasing pressure	D15 Rotating table returning position	D16 Rotating table back	D17 Rotating table lift	D18 Rotating table fall	D19 Stripping advance	D20 Stripping back	D21 Turn-up reset	D22 Turn-up rotating
1	Rotating table fall		+	+									+					+				
2	Rotating table back		+	+									+									
3	Injecting blowing fast clamping	+	+	+						+		+	+									
4	Injecting blowing slow clamping, low-pressure ould protection		+	+						+			+									
5	Increasing pressure, locking mould		+	+						+				+								
6	Stand advance		+	+		+				+				+								
7	injecting		+	+		+			+	+				+								
8	Keeping pressure		+	+		+			+	+				+								
9	Stripping advance		+	+						+				+					+			
10	Turn-up rotating		+	+						+				+								+
11	Turn-up reset		+	+				+		+				+							+	
12	Stripping back		+	+			+			+										+		
13	Pre-plasticizing		+	+						+												
14	Anti-overflowing		+	+	+																	
15	Cooling		+	+							+											
16	Stand back		+	+							+											
17	Injecting/blowing slow opening mould		+	+							+											
18	Injecting/ blowing fast opening mould		+	+																		
19	Rotating table lift		+	+													+					
20	Rotating table indexing		+	+												+						



Schematic Diagram of Hydraulic System of MSZ 25 Injecting Blowing Hollow Shaping Machine

MSZ25



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审核		李勇	日期	2007.7.13

图样标记	重量	比例
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共 张	第 张	

江苏维达机械有限公司

气动原理图

MSZ25

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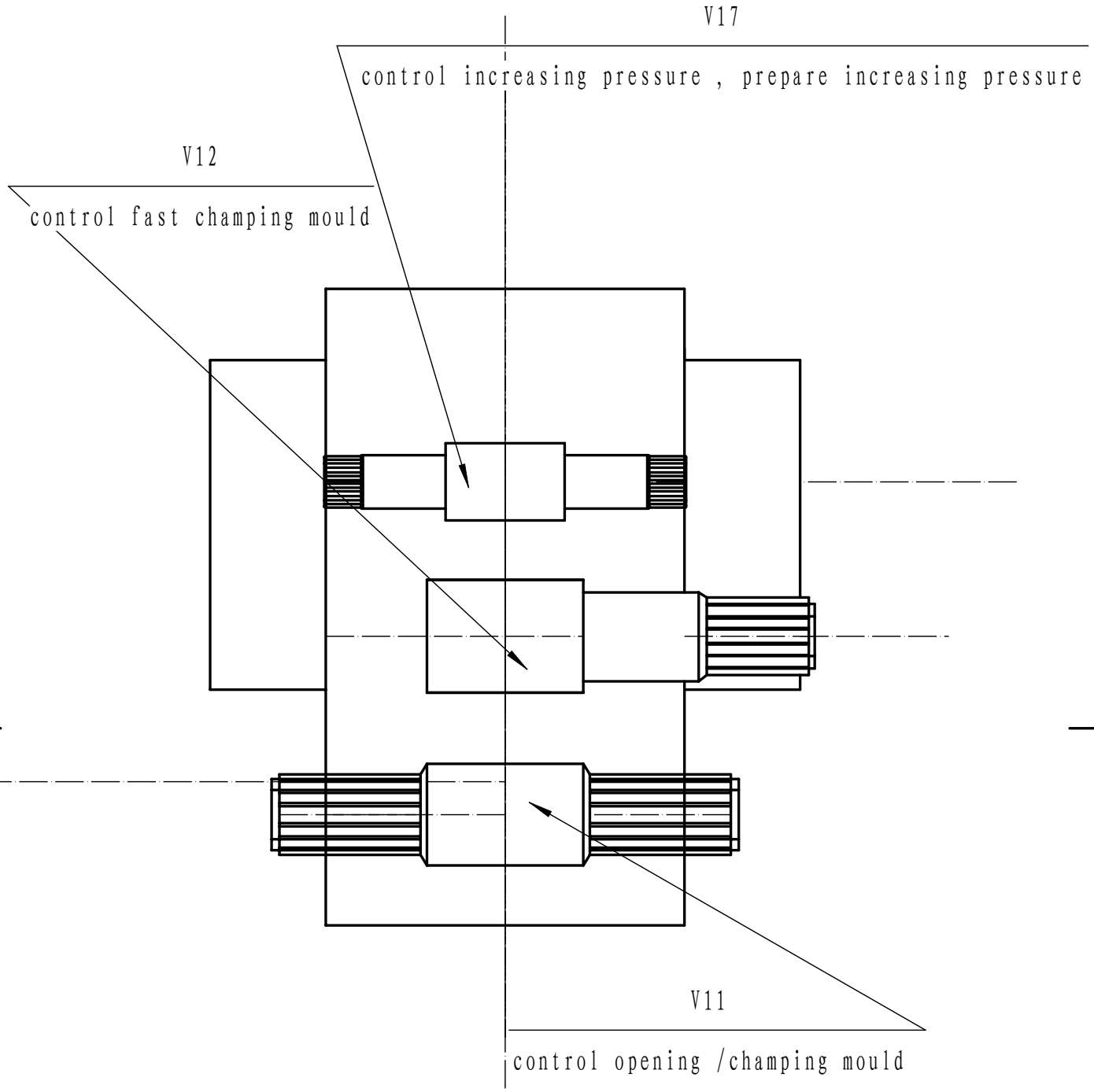
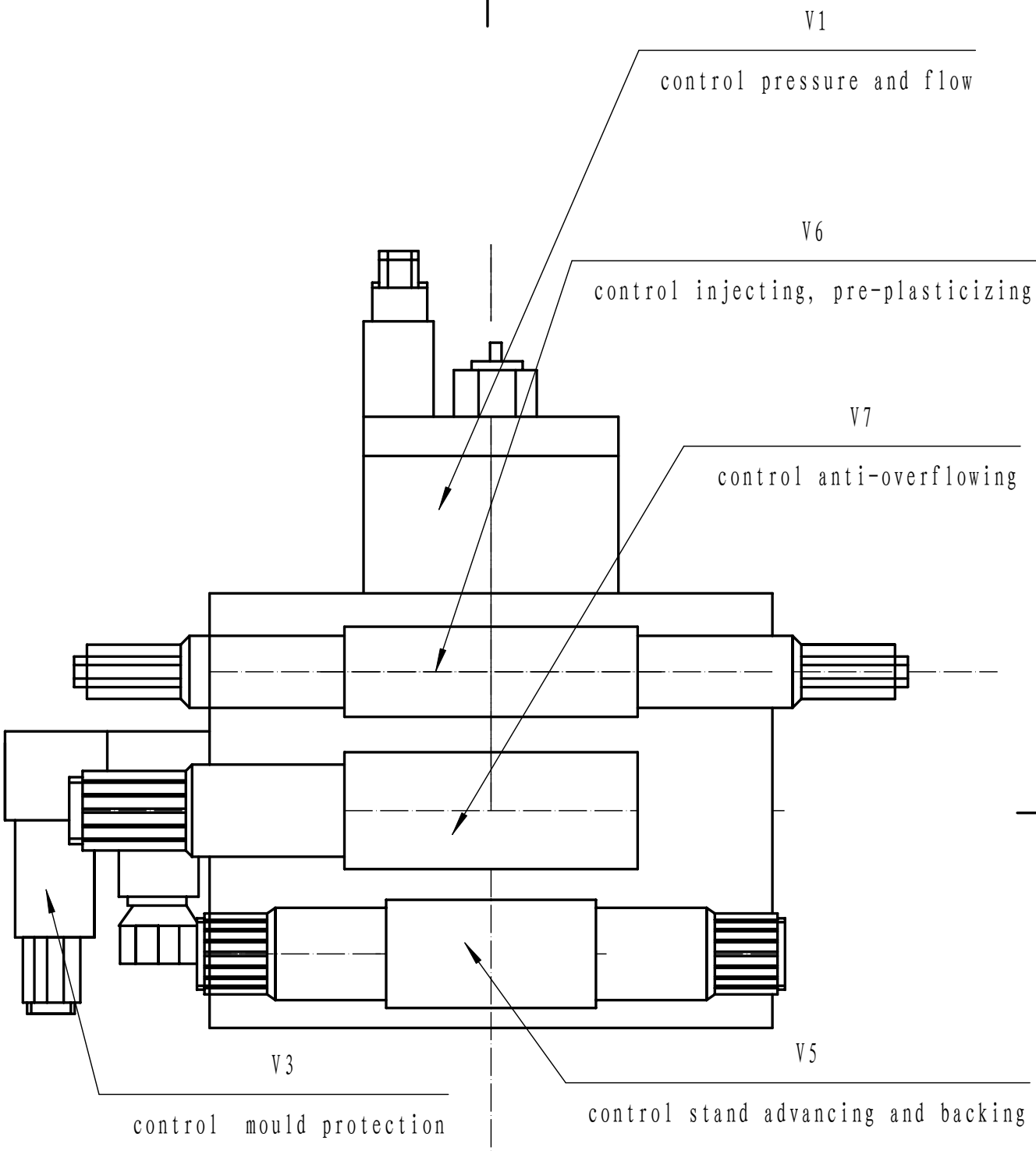
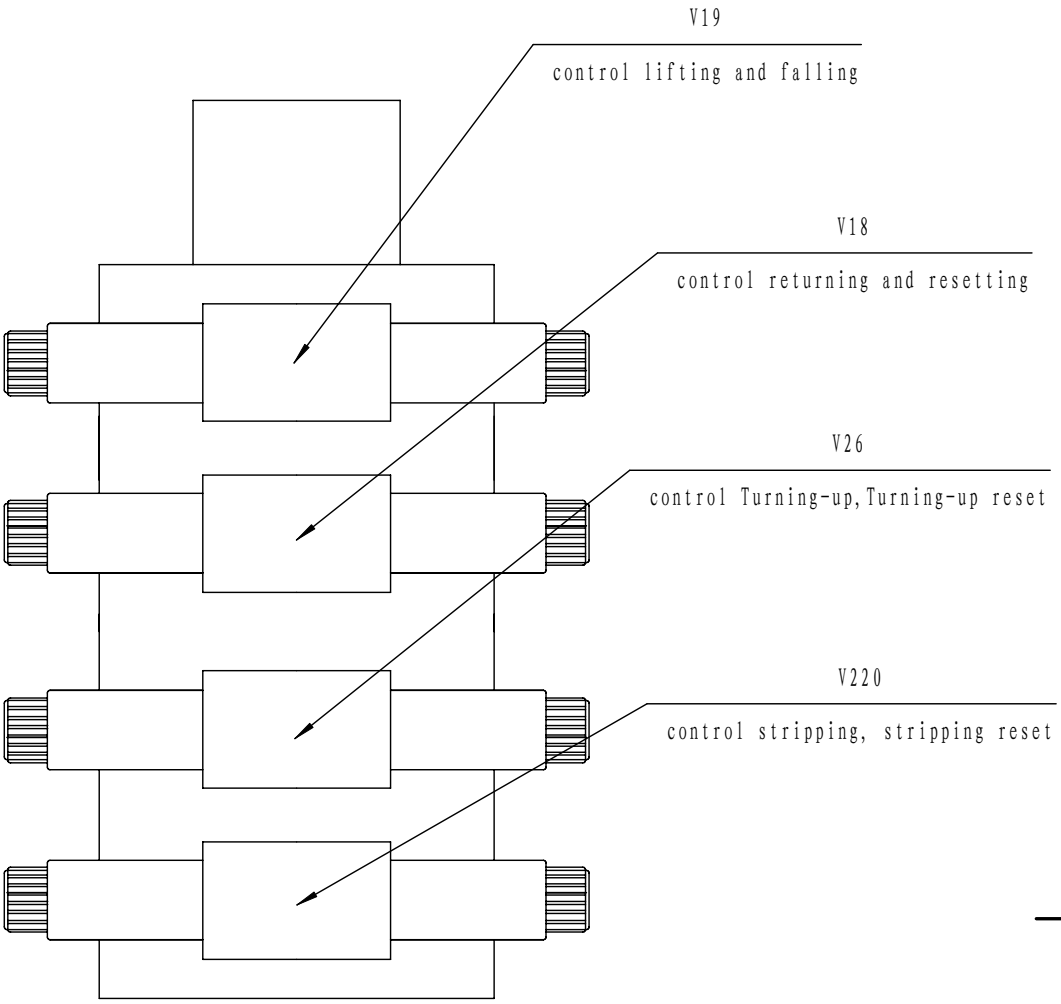


Layout Drawing of Injection Blow Clamping Mould Hydraulic Valve

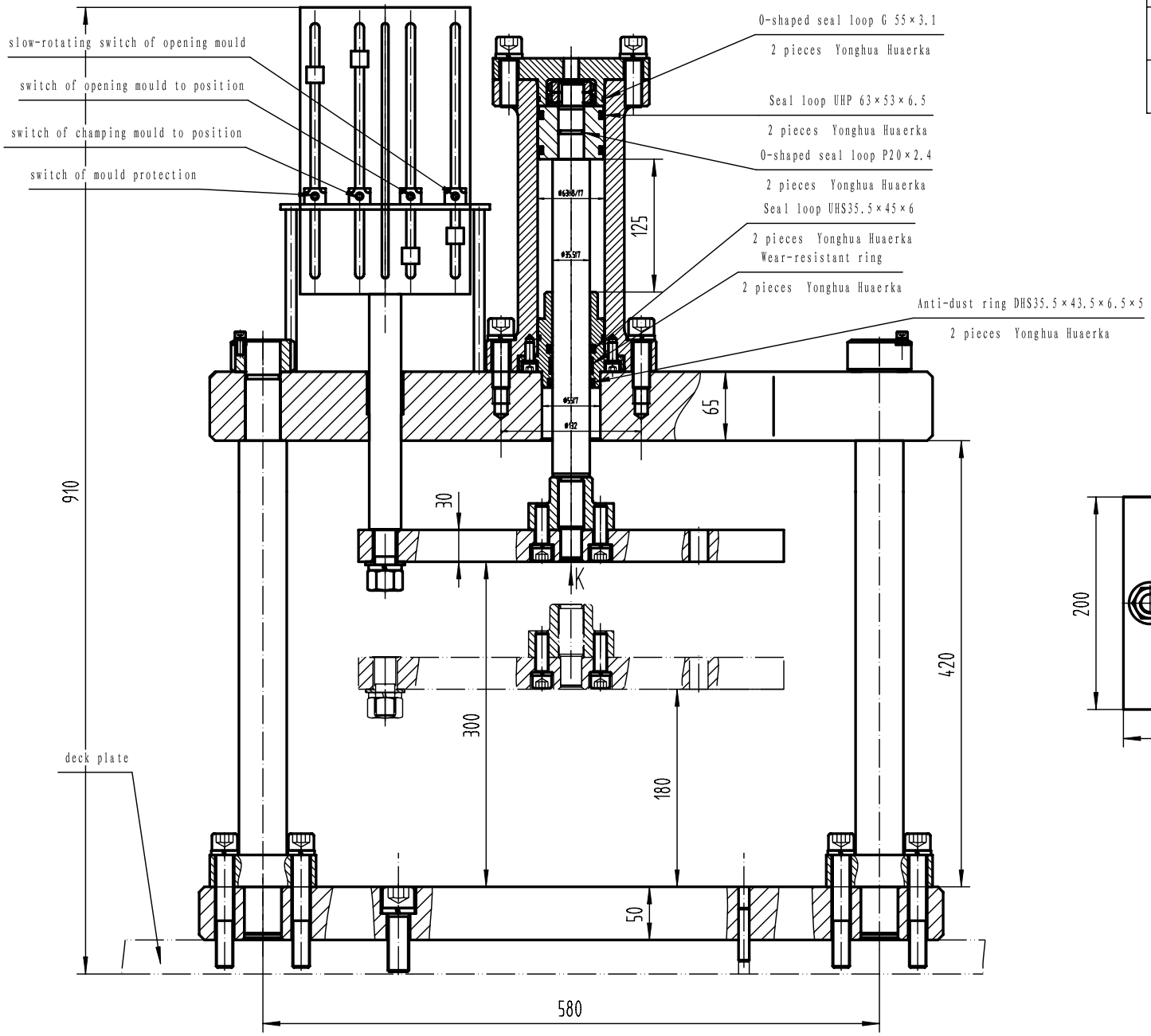


Layout Drawing of Injection ,P/Q Hydraulic Valve

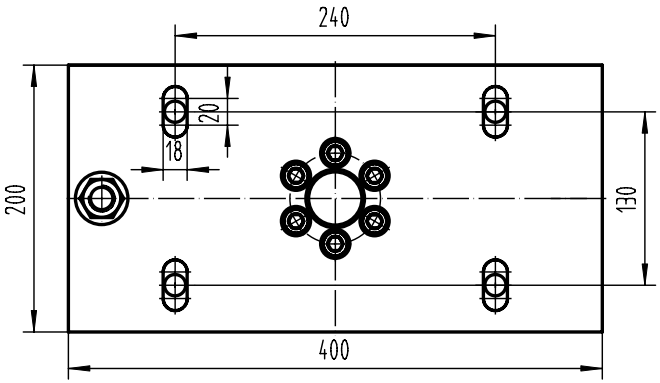


Layout Drawing of Hydraulic Valve for Turning-up, Stripping, Rotation and Lifting

Champing mould limit	120mm
Min. mould thickness	180mm
Max. mould size (L × W)	300 × 200mm

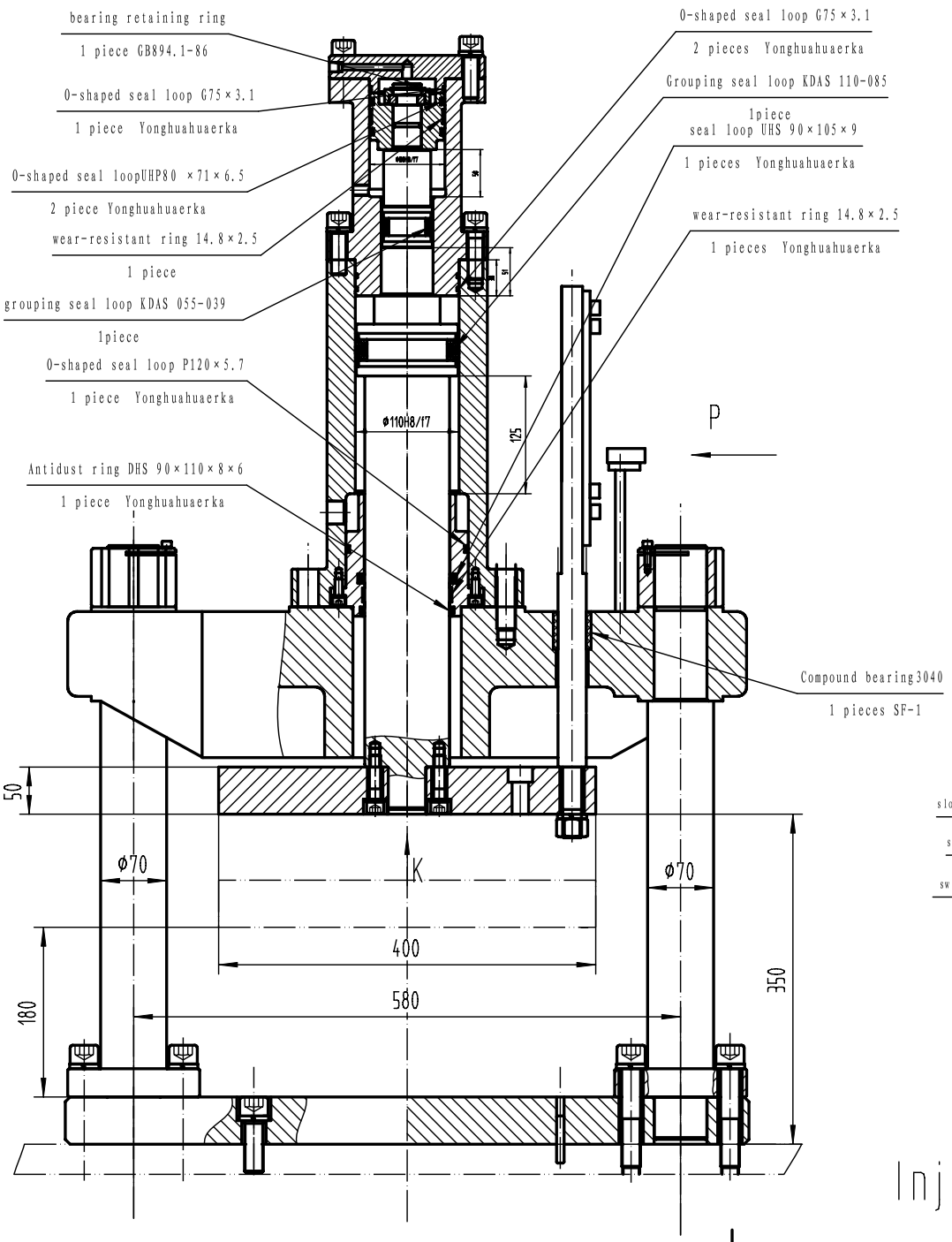


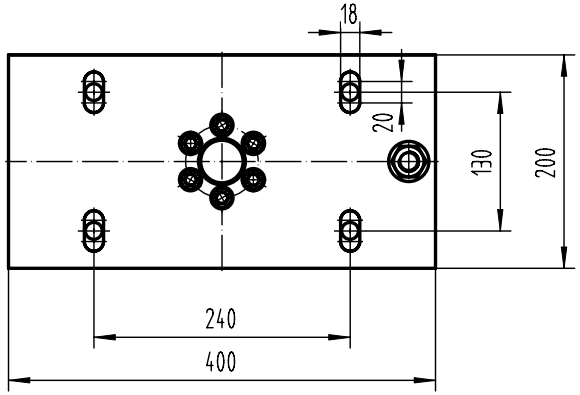
K向



Blow Clamping Mould Device

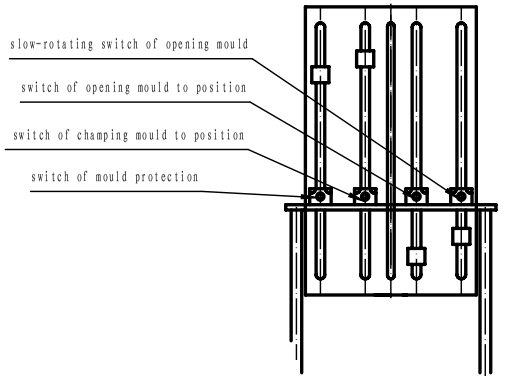
Locking mould force	280KN
Clamping mould stroke	120mm
Mini. Mould thickness	180mm
Max. mould size (L×W)	300×200
Max. oil pressure of locking mould	29.6MPa



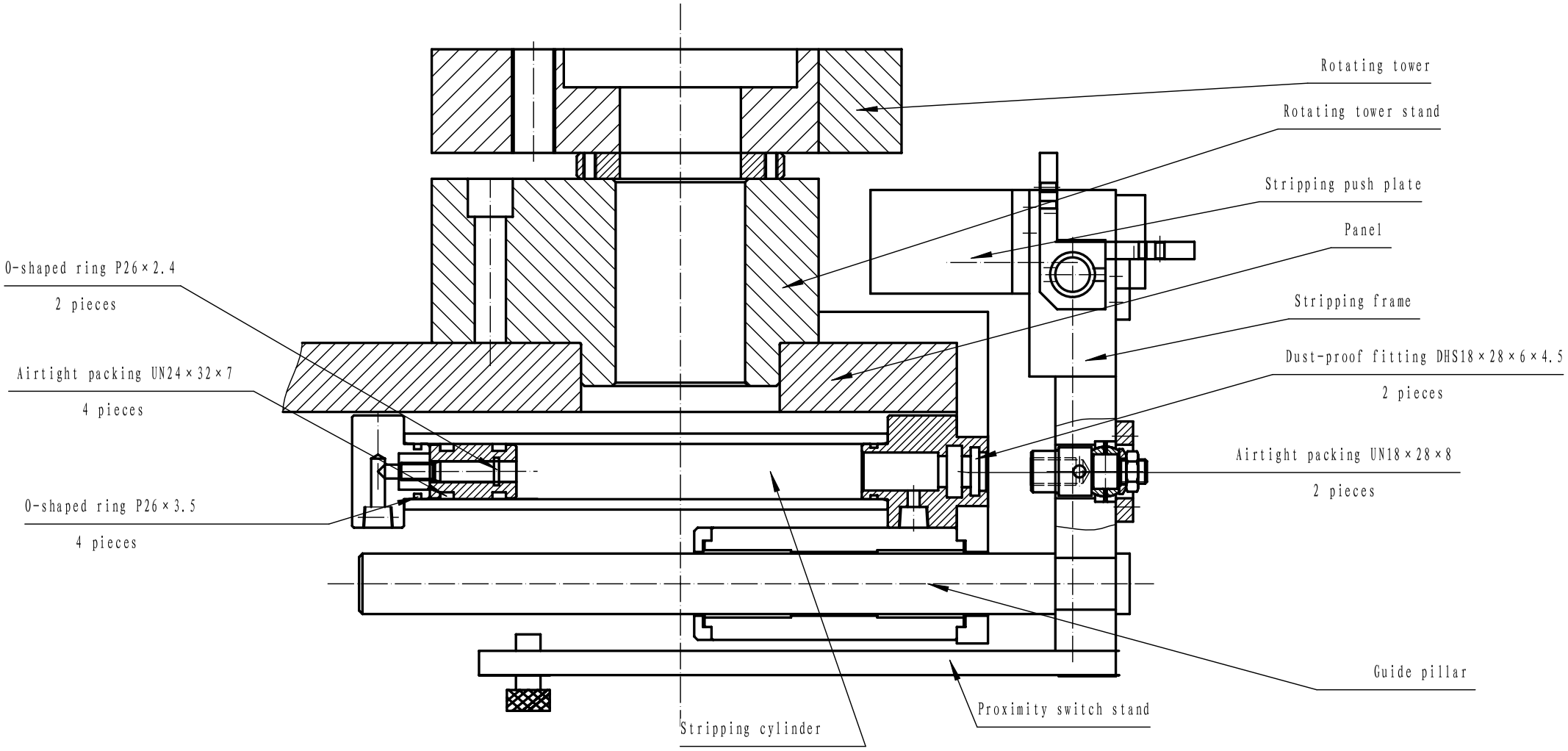


K direction

P direction



Injection Clamping Mould Device



Assembling Drawing of Stripping Turning-Up Component

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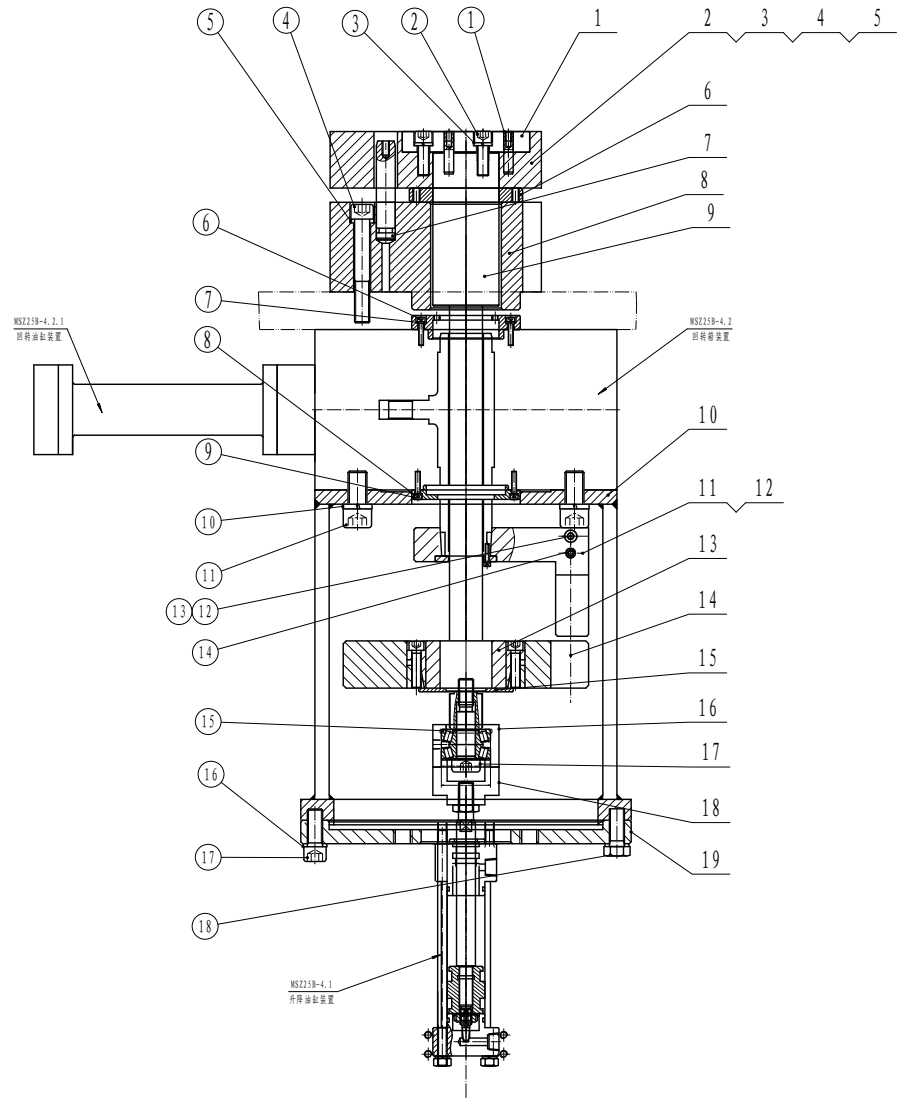


机器在长时间工作后，可能会造成磨损或螺钉松动，造成三工位回转不能准确定位，则需要进行相关调整。

首先检查转位装置相关零件，找出故障原因。

A. 故障原因确认是由滚轮上的内六角螺钉松动引起

1. 在手动状态下操作机器，建议由专业人员维护。任何维护工作不得损坏机器和人，动作不得有相互干涉。
2. 将转塔上升到位
3. 将转塔回转到位
4. 将转塔下降到位
5. 逐个均匀对称地拧松滚轮帐套上面的内六角螺钉（M8）
6. 旋转滚轮的位置，使滚轮开口对准拨叉，在拨叉和滚轮不干涉的情况下，将转塔上升下降2~3次，在转塔和三个定位导柱相互配合的情况下，使得拨叉和拨叉盘充分配合
7. 将转塔升降在一半行程的情况下逐个均匀对称地拧紧滚轮帐套上面的内六角螺钉
8. 检验确认三工位回转正确

B. 故障原因确认是由回转油缸或回转箱装配松动引起

1. 检查回转箱内部零件有无松动或损坏
2. 活塞杆连接头和回转箱连接处2内六角锁紧螺钉有无松动
3. 活塞和活塞杆的连接有无松动
4. 重新紧固后装配时注意

保证活塞杆连接头和回转箱推板连接配合处在回转箱长槽内的初始位置

保证回转油缸行程不做变更

序号	代号	名称	数量	材料	单件	总计重量	备注
13	MSZ25-4-18	方孔套	1	45			
12	MSZ25-4-14	拨叉盘	1	45			
11	MSZ25-4-13	拨叉杆	1	45			
10	MSZ25-4-19	连接座	1	45组焊			
9	MSZ25-4-12	芯轴	1	45			
8	MSZ25-4-2B	转塔座	1	45			
7	MSZ25-4-27	导柱	3	GCr15			
6	MSZ25-4-4A	调整块	1	QT400			
5	MSZ25-4-9	气缸小活塞	6	QT500			
4	MSZ25-4-8	模芯推板	3	45			
3	MSZ25-4-5	模芯安装版	3	LC4			
2	MSZ25-4-1A	转塔	1	LC4			
1	MSZ25-4-3A	转塔连接板	1	45			

序号	代号	名称	数量	材料	备注
⑱	GB/T5783-86	外六角螺栓M16×40	2	钢	
⑰	GB/T 70.1-2000	内六角圆柱头螺钉 M16X40	2		
⑯	GB/T 93-1987	标准型弹簧垫圈 16	4	65Mn	
⑮	GB/T276-1994	带防尘盖的深沟球轴承6200-2Z	2		
⑭		内螺纹圆柱销B型B10X80	1	35	
⑬	GB/T 70.1-2000	内六角圆柱头螺钉 10X80	1	65Mn	
⑫	GB/T 93-1987	标准型弹簧垫圈 8	1	65Mn	
⑪	GB/T 70.1-2000	内六角圆柱头螺钉 20X40	4		
⑩	GB/T 93-1987	标准型弹簧垫圈 20	4	65Mn	
⑨	GB/T 70.1-2000	内六角圆柱头螺钉 M5X25	4		
⑧	GB/T 93-1987	标准型弹簧垫圈 5	4	65Mn	
⑦	GB/T 93-1987	标准型弹簧垫圈 5	12	65Mn	
⑥	GB/T 70.1-2000	内六角圆柱头螺钉 M5X25	12		
⑤	GB/T 93-1987	标准型弹簧垫圈 16	3	65Mn	
④	GB/T 70.1-2000	内六角圆柱头螺钉 M16X110	3		
③	GB/T 93-1987	标准型弹簧垫圈 12	9	65Mn	
②	GB/T 70.1-2000	内六角圆柱头螺钉 M12X20	9		
①		内螺纹圆柱销B型 B10X45	3	35	
19	MSZ25-4-20	安装法兰	1	A3	
18	MSZ25-4-22	轴承座端盖	1	45	
17	MSZ25-4-23	轴肩头螺钉	1	45	
16	MSZ25-4-21	提升轴承座	1	45	
15	MSZ25-4-10	压板	1	45	
14	MSZ25-4-16	滚轮	1	QT500-7	

借（通）用件登记

旧底图总号

底图总号

签字

日期

档案员 日期

标记	处数	更改文件名	签字	日期
设计	陆楠	标准化		
制图		工艺		
校对		审定		
审核		日期	2010.02.02	

部件

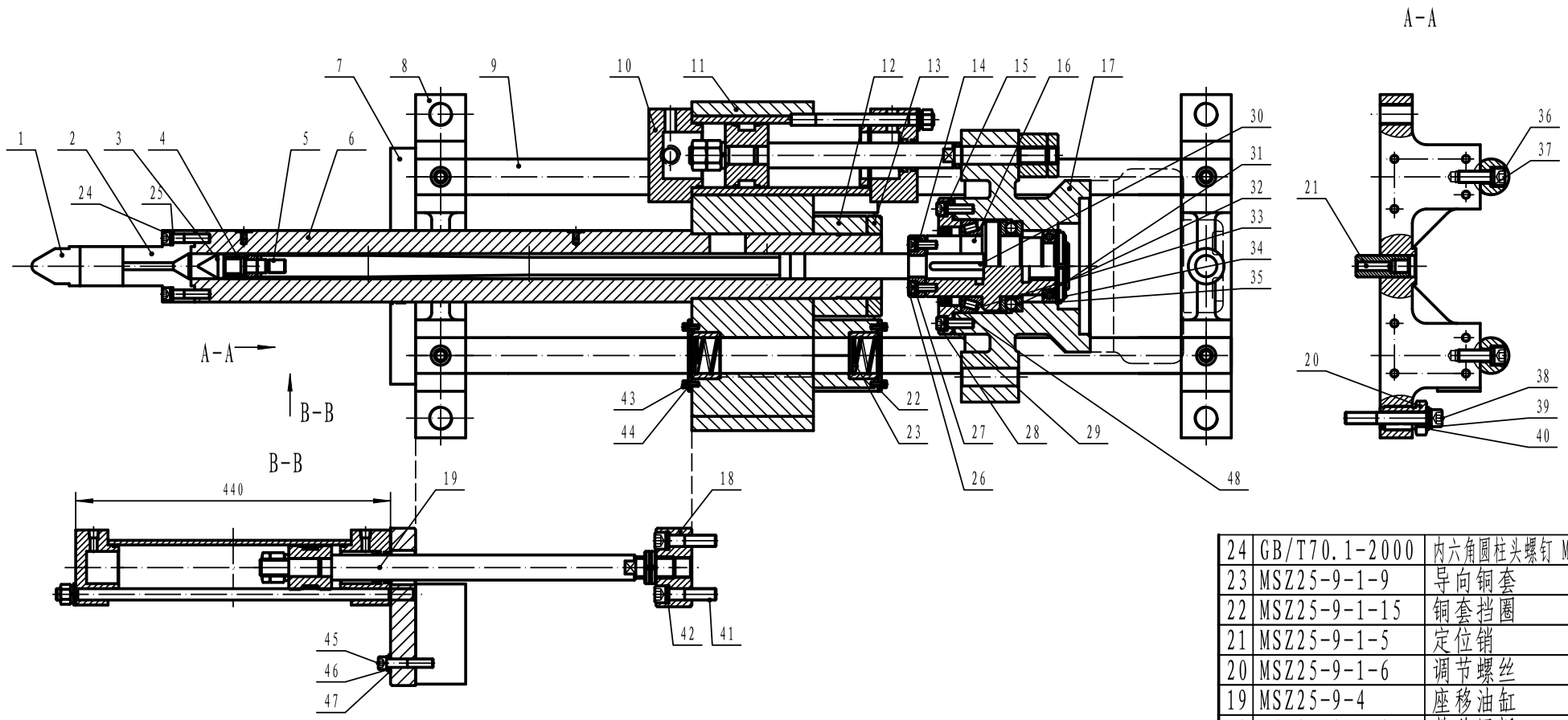
图样标记	重量	比例
		1:4
共 张	第 张	

江苏维达机械有限公司

注吹转位装置

MSZ25-4

MSZ25-9



技术要求

1. 各密封件装配前必须浸透油。
2. 装配滚动轴承允许采用机油加热进行热装，油的温度不得超过100℃。
3. 装配液压系统时允许使用密封填料或密封胶，但应防止进入系统中。
4. 进入装配的零件及部件（包括外购件、外协件），均必须具有检验部门的合格证方能进行装配。
5. 零件在装配前必须清理和清洗干净，不得有毛刺、飞边、氧化皮、锈蚀、切屑、油污、着色剂和灰尘等。
6. 装配过程中零件不允许磕、碰、划伤和锈蚀。
7. 螺钉、螺栓和螺母紧固时，严禁打击或使用不合适的旋具和扳手。紧固后螺钉槽、螺母和螺钉、螺栓头部不得损坏。
8. 平键与轴上键槽两侧面应均匀接触，其配合面不得有间隙。
9. 滚动轴承装好后用手转动应灵活、平稳。

序号	代号	名称	数量	材料	单件	总计	备注
					重量		
48		骨架油封GP85×110×12	1				
47	GB95-2002	平垫圈-C级 12	8	钢			
46	GB93-1987	标准型弹簧垫圈 12	8	65Mn			
45	GB/T70.1-2000	内六角圆柱头螺钉 M12X65	8				
44	GB93-1987	标准型弹簧垫圈 6	32	65Mn			
43	GB/T70.1-2000	内六角圆柱头螺钉 M6X16	32				
42	GB93-1987	标准型弹簧垫圈 16	4	65Mn			
41	GB/T70.1-2000	内六角圆柱头螺钉 M16X70	4				
40	GB95-2002	平垫圈-C级 16	4	钢			
39	GB859-1987	轻型弹簧垫圈 16	4	65Mn			代替GB/T859-1976
38	GB/T70.1-2000	内六角圆柱头螺钉 M16X120	4				
37	GB93-1987	标准型弹簧垫圈 16	4	65Mn			
36	GB/T70.1-2000	内六角圆柱头螺钉 M16X50	4				
35	GB858-1988	圆螺母用止动垫圈 65*	1	Q235A			代替GB/T859-1976
34	GB812-1988	圆螺母 M65X2	1				
33		圆锥滚子轴承30000型 32017	1				20系列
32		推力球轴承51000型 51217	1				12系列
31		深沟球轴承60000型 6013	1				10系列
30		普通平键A型 10X70	1	45钢			
29	GB93-1987	标准型弹簧垫圈 12	6	65Mn			
28	GB/T70.1-2000	内六角圆柱头螺钉 M12X40	6				
27	GB93-1987	标准型弹簧垫圈 10	6	65Mn			
26	GB/T70.1-2000	内六角圆柱头螺钉 M10X30	6				
25	GB93-1987	标准型弹簧垫圈 12	10	65Mn			
24	GB/T70.1-2000	内六角圆柱头螺钉 M12X55	10				
23	MSZ25-9-1-9	导向铜套	8	ZCuSn5Pb5Zn5			
22	MSZ25-9-1-15	铜套挡圈	8	45			
21	MSZ25-9-1-5	定位销	1	45			
20	MSZ25-9-1-6	调节螺丝	4	45			
19	MSZ25-9-4	座移油缸	1				见装配图
18	MSZ25-9-1-8	整移压板	1	45			
17	MSZ25-9-1-2	射胶二板	1	QT500-7			
16	MSZ25-9-1-13	传动轴	1	40Cr			
15	MSZ25-9-1-14	轴承挡圈	1	45			需配作
14	MSZ25-9-1-12	哈夫块	1	45			
13	MSZ25-9-1-11	薄机筒螺母	1	45			
12	MSZ25-9-1-10	厚机筒螺母	1	45			
11	MSZ25-9-1-1	射胶头板	1	QT500-7			
10	MSZ25-9-3	射胶油缸	2				见装配图
9	MSZ25-9-1-4	座移导柱	2	45			
8	MSZ25-9-1-3	射胶支架	2	QT500-7			
7	MSZ25-9-1-7	座移缸座	1	A3			
6	MSZ25-9-2-3	机筒	1	38CrMoAl			
5	MSZ25-9-2-1	螺杆	1	38CrMoAl			
4	MSZ25-9-2-6	止逆环	1	38CrMoAl			
3	MSZ25-9-2-2	螺杆头	1	38CrMoAl			
2	MSZ25-9-2-4	机筒前体	1	38CrMoAl			
1	MSZ25-9-2-5	喷嘴	1	38CrMoAl			

标记	处数	更改文件名	签字	日期
设计	李强	标准化		
制图		工艺		
校对	王利锋	审定		
审核	李勇	日期	2007	

装配图

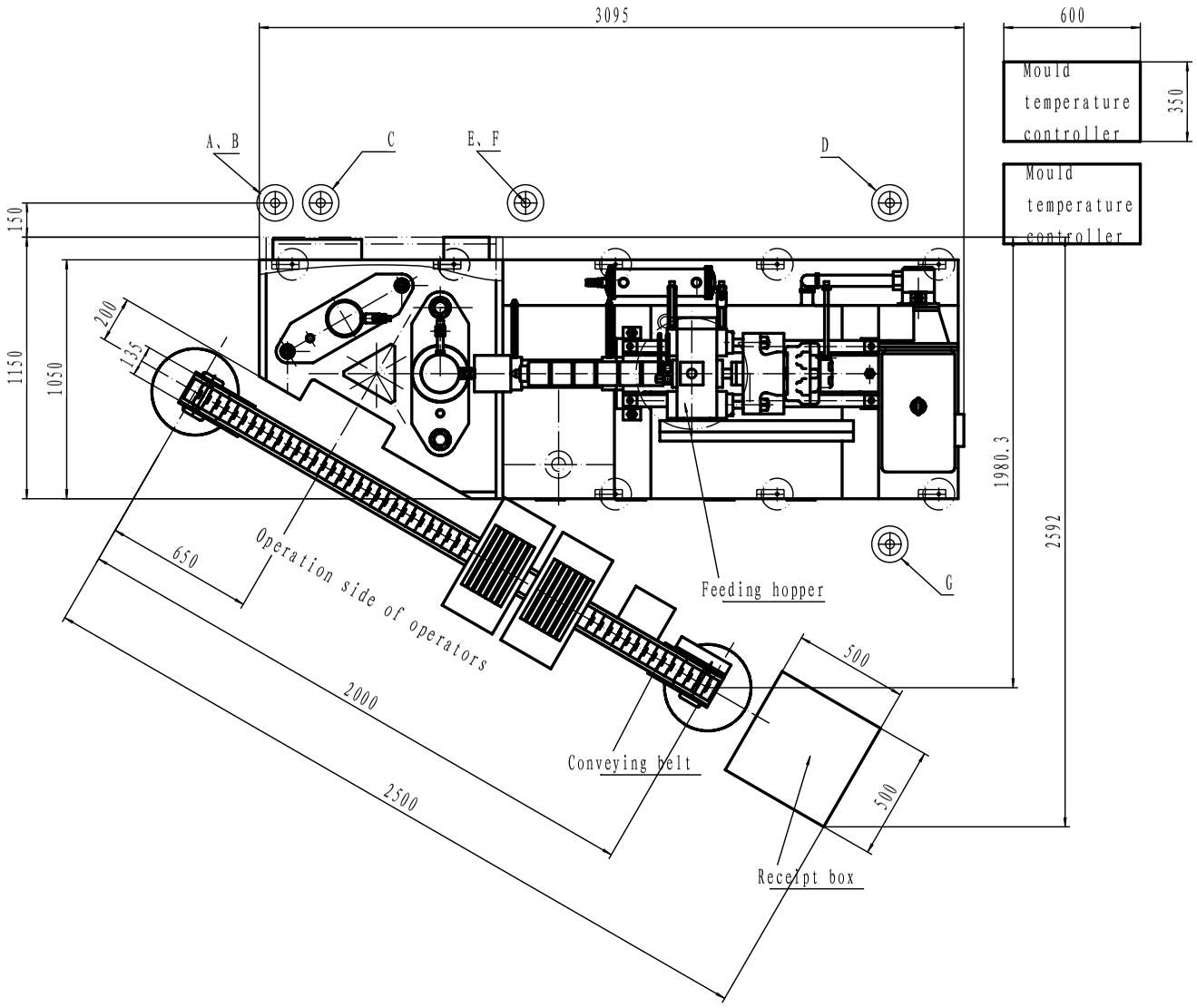
图样标记	重量	比例
		1:6
共 张	第 张	

江苏维达机械有限公司

射胶部件

MSZ25-9

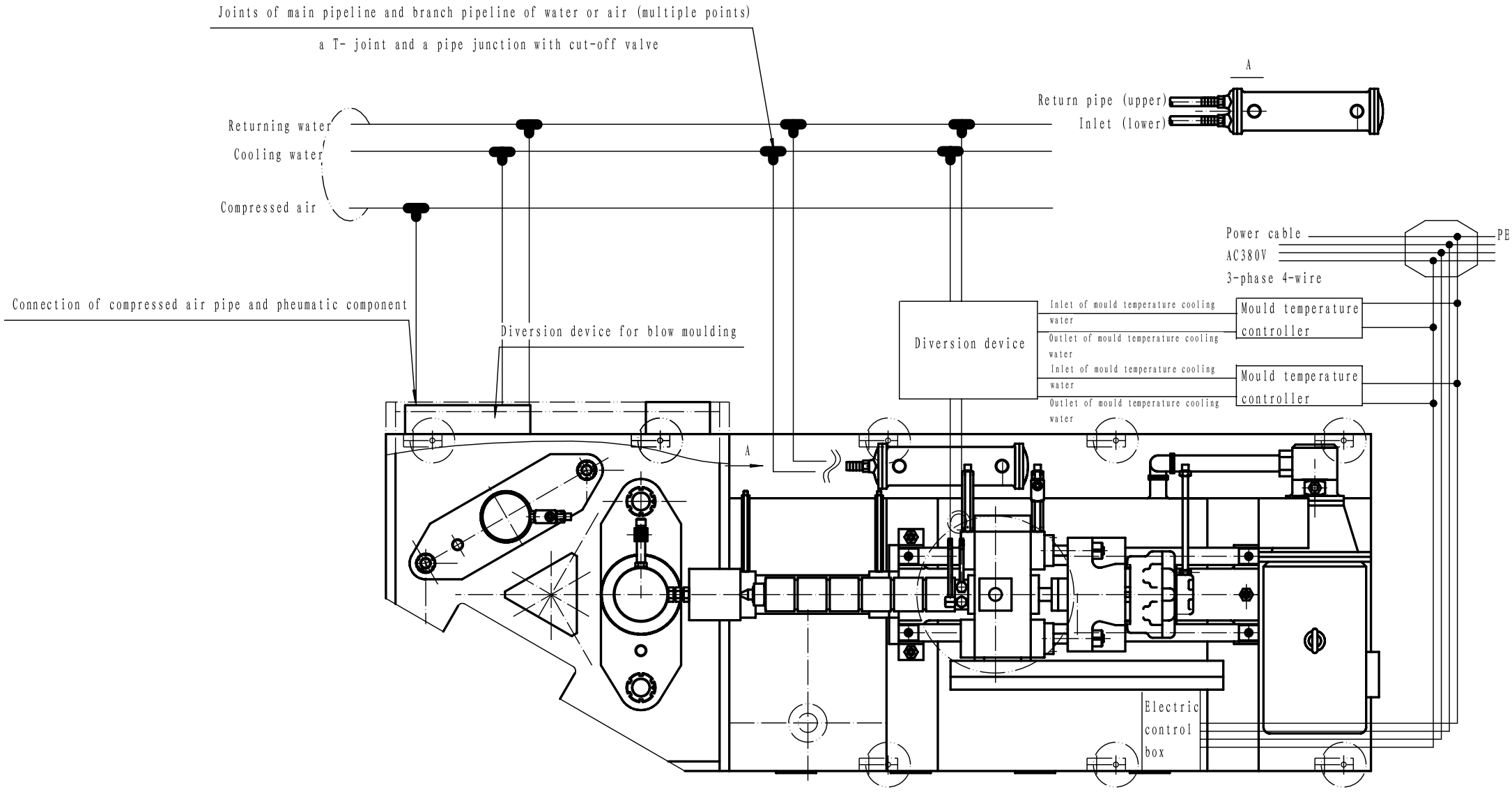
借（通）用件登记
旧底图总号
底图总号
签字
日期
档案员 日期



Explanation:

1. Pre-embed two main water pipes: (1) cooling water (within 25 ℃), inlet caliber ⩾2", keep 0.3MPa. If over 80ml bottles are produced, cooling the mould is thought to adopt frozen water (about 10 ℃); (2) The return pipe caliber of cooling water ⩾2 1/2", no back pressure.
2. Pre-embed one air main pipe, the caliber ⩾1", supplying air pressure ⩾ 1 MPa . The air consumption of a set of MSZ 25 ⩾ 0.3M3/min.
3. A set of MSZ 25 needs 2 sets of mould temperature controller. P =5kw/set, 10 kw in all. Pre-embed AC 380V 3-phase power cable.
4. The power source for main machine of MSZ 25 P=25kw/set. Pre-embed AC 380 V 3-phase power cable.
5. A port is the inlet of cooling water of mould, the caliber 1", it is with cut-off valve; B port is for the return cooling water of mould, caliber 1"; C port is the outlet of compressed air, the caliber 3/4" , with cut-off valve; D port is the exit of the power cable of mould temperature controller; E port is the inlet of cooling water for cooler of main machine. The caliber 1" , with cut-off valve; F port is for the return cooling water of main machine , the caliber 1" with cut-off valve; G port is the exit of power cable of main machine.
6. The net height of the factory building is 2.8m. The overall size of the machine is 3100×1150×2300mm. When the consumers are planning the detail positions of the machine, please arrange the space positions between the machine and the factory building, between the machines according to your actual conditions. Besides, the water-power-air supplying specification and arrangement can be designed by yourself.

Layout Drawing of Machine



Water-Power-Air Supplement Schematic Drawing

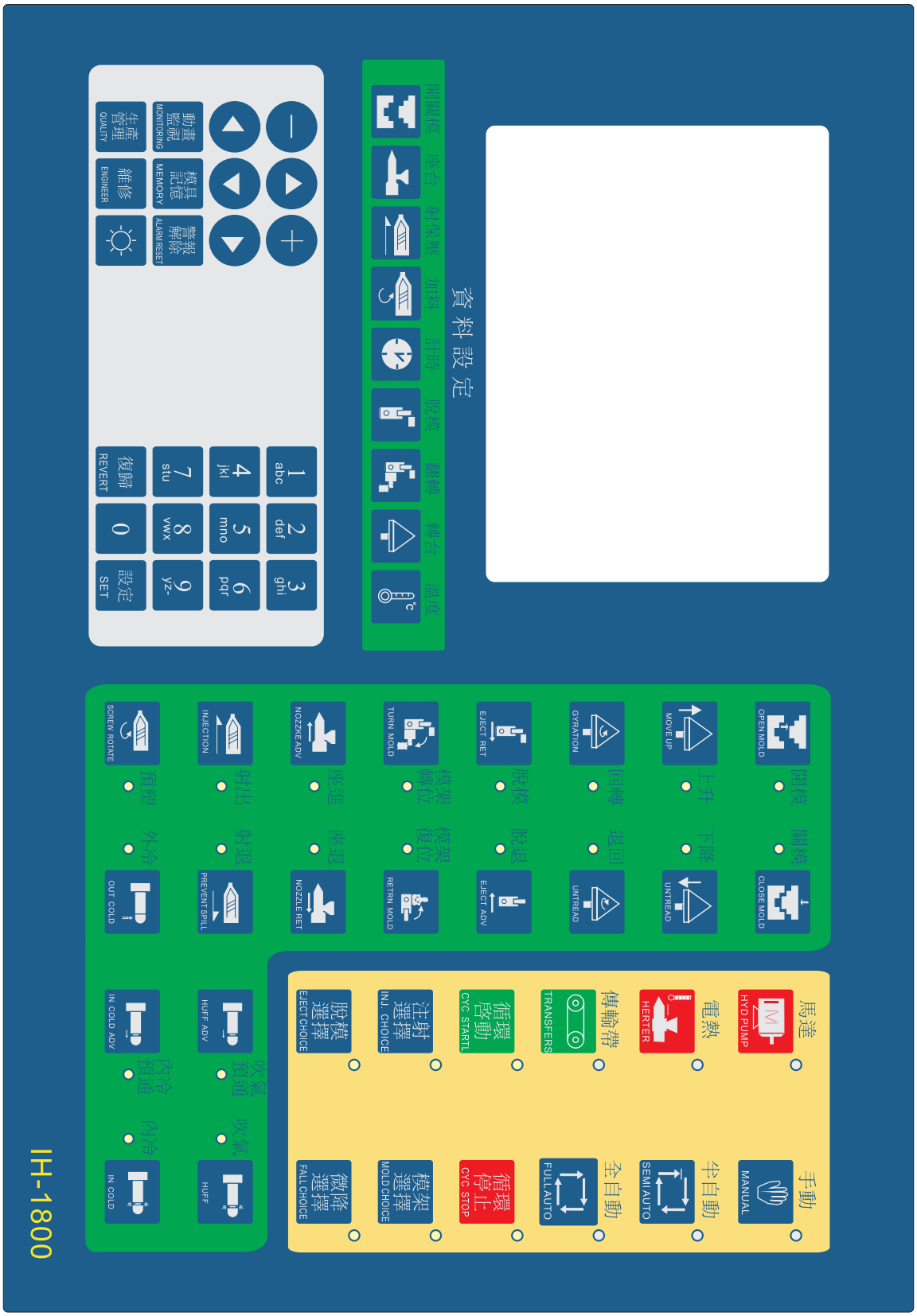
MSZ 25 Model

Injection Blow Hollow Moulding Machine

ELECTRICTY CONTROL OPERATION MANUAL

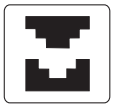
Jiangsu Victor Machinery Co.,Ltd.

CATALOGUE


IH-1800
資料設定
開關段
座台
射保壓
加料
計時
脫模
翻轉
轉台
溫度
動畫監視 MONITORING
生產管理 QUALITY
模具記憶 MEMORY
維修 ENGINEER
警報解除 ALARM RESET
復歸 REVERT
設定 SET
1 abc
2 def
3 ghi
4 jkl
5 mno
6 pqr
7 stu
8 vwx
9 yz-
0
馬達 HYD PUMP
電熱 HERTER
傳輸帶 TRANSFERS
循環啓動 CYC START
注射選擇 INJ. CHOICE
脫模選擇 EJECT CHOICE
手動 MANUAL
半自動 SEMI AUTO
全自動 FULL AUTO
循環停止 CYC STOP
模架選擇 MOLD CHOICE
微降選擇 FALL CHOICE
開模 OPEN MOLD
上升 MOVE UP
回轉 GYRATION
脫模 EJECT RET
模架轉位 TURN MOLD
進退 NOZZKE ADV
射出 INJECTION
閉座 SCREW ROTATE
關模 CLOSE MOLD
下降 UNTREAD
退回 UNTREAD
脫退 EJECT ADV
模架復位 RETRN MOLD
退退 NOZZLE RET
射退 PREVENT SPILL
外冷 OUT COLD
內冷 IN COLD
內冷預通 IN COLD ADV
吹氣 HUFF
吹氣預通 HUFF ADV

KEY OPERATING INSTRUCTIONS

Set the key area

SWITCH MOULD  SWITCH MOULD PAGE

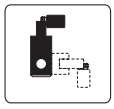
INJ.UNIT  INJ.UNIT PAGE

INJECTION  INJECTION PAGE

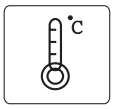
SCREW ROTATE  SCREW ROTATE PAGE

TIME  TIME PAGE

EJECTTOR  EJECTTOR PAGE

ROTARY  ROTARY PAGE

ROTARY TABLE  ROTARY TABLE PAGE

TEMPERATURE  TEMPERATURE PAGE

MONITORING

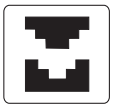
ALARM RESET

MEMORY

QUALITY

ENGINEER

SWITCH MOULD



Press this key in to open the mold and close mold enactment the painting the page

INJ.UNIT

Press this key in to inj.unit an enactment painting page

INJECTION

Press this key in to injection、protect enactment painting page

SCREW ROTATE

Press this key in to screw rotare enactment painting page

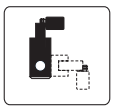
TIME

Press this key in to time enactment painting page

EJECTTOR

Press this key in to ejector enactment painting page

ROTARY

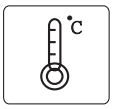


Press this key in to rotary enactment painting page

ROTARY TABLE

Press this key in to rotarytable an enactment painting page

TEMPERATURE



Press this key in to temperature enactment painting page

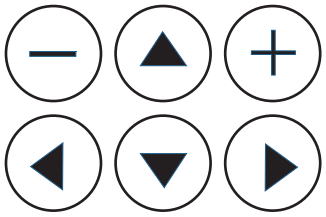
Press this key in to monitoring enactment painting page

Press this key in to memory enactment painting page

Press this key in to qualuty enactment painting page

Press this key in to engineer enactment painting page

KEY OPERATING INSTRUCTIONS



Numeral/the letter of alphabet inputs key ;be input in the pressure、flow、time column is number character key ; at the name column input, press first time "2" ,the second-time "a",for the third time "b"

The or so ambulation of the cursor top and bottom

Input the key:when the number change s for the new initial value, inputing the numberal through,must press to lose after going into the key , the importation parameter is valid

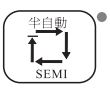
Press this key once, the number adds 1 or reduce 1,pres this key and do not put,the number is tried to add or tried reduce

When the initial value number is modified,before diding not press importation the number will gleam,press to "revert" to key and will recover the previous initial value at this time

Carry on the back the light adjustment, press once each time to change to carry on the back the light adjustment

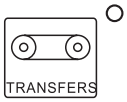
SPECIAL KEY AREA

auto status

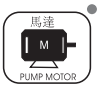


semis auto status

manumotive status



transfers status



motor ON/OFF key

heater ON/OFF key

Key operating instructions

Function key area

循環
啓動
CYC STARTL

Press this key to carry on the action circulation under the automatic appearance

循環
停止
CYC STOP

Press this key to stop circulation under the automatic appearance

注射
選擇
INJ. CHOICE

Inject to choose the key,iust can do to project the action while chooseing this key

模架
選擇
MOLD CHOICE

The mold choose the key,just can make the mold to turn an action while winning an election to choose this key

脫模
選擇
EJECT CHOICE

The ejection choose the key,just can carry on the ejection action while being this key choice

微降
選擇
FALL CHOICE

MOVESES TO OPERATE TH KEY (MOVE THE APPEARANCE)

Open the mold key:press this key light bright carry out to open the mold action
Condition: the ejection backs to terminate

Close the mold key:press this key light bright carry out to close the mold action
Condition: safety door ON,rotary table the set descend,ejection backs to terminate

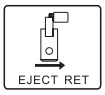
Rise the key:press this key light bright carry out to turn a rising action
Condition: shoot the mold to arrive,blow the mold to arrive,turn round into and back

Descend the key:press this key light bright carry out to turn the set descend the action
Condition: shoot the mold to arrive,blow the mold to arrive,turn round into and back,
the ejection backs to terminate

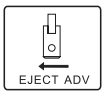
Turn round the key:press this key light bright carry out to turn the set to turn around the action
Condition: shoot the mold to arrive,blow the mold to arrive,turn the set to rise

Key operating instructions

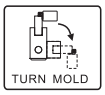
Send back the key:press this key light bright carry out to turn the set to send back the action
Condition: shoot the mold to arrive,blow the mold to arrive,turn a rising and descend to terminate



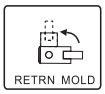
Eject ret the key:press this key light bright carry out eject ret to enter the action for bright hour
Condition:ejection function want to choose



Eject ret the key:press this key light bright carry out eject adv to enter the action for bright hour
Condition:ejection function want to choose



The mold turns a key:press this key light bright carry out the mold to turn an action
Condition:the mold a function wants the choice,ejection backs to terminate



The mold returns to the key:while diding not carry out the mold to turn an action always return to the action

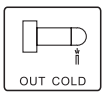
The nozzke adv key:press this key light of the bright performance nozzke adv the action
Condition:nozzke adv did not terminate

The nozzke ret key:press this key light of the bright performance nozzke ret the action
Condition:nozzke ret did not terminate

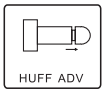
The injectiont key:press this key bright performance injection of this key light action
Condition:temperature has no abnormslity

Prevent spill the key:press this key light bright carry out to prevent spill the action
Condition:temperature has no abnormslity

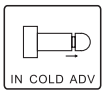
Screw rotate the key:press this key light bright carry out to screw rotate the action
Condition:temperature has no abnormslity,injection the function to want to choose



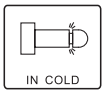
Outside cold key: press cold action outside the bright performance of this key light



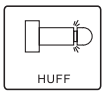
Huff adv key:press this key light right carry to huff adv to prepare an action



In cold adv key:press this key light right carry to in cold adv to prepare an action

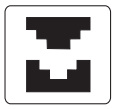


Inside cold key: press the bright hour of this key light to carry out inside the cold action

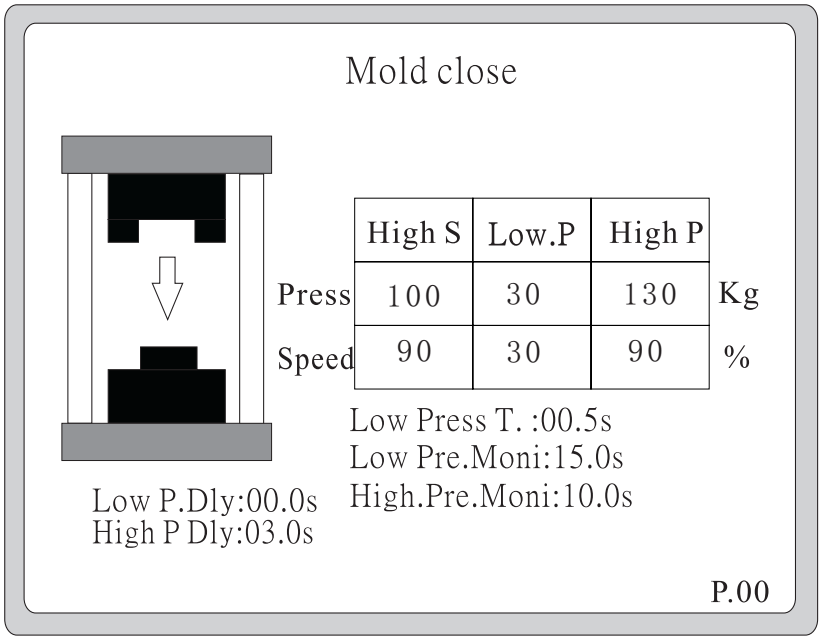


Huff the key:press this key light bright carry out to huff the action

switch mold



Press once



Note:

Pressure:

Set in the this trip opposite the pressure that should act

Flow:

Set in the this trip opposite the flow that should act

Delay to close the mold:

Turn the set to delay that time to do to close the mold action after deseconding terminate

Delay to lock the mold:

Shoot、blow the mold to delay that time to carry on increasing to press the action

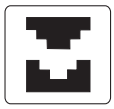
Protect to press to account the hour

After closing to run in to protect to press the switch in the mold process in setting time the pass mold did not go to since the alert low pressure time is up

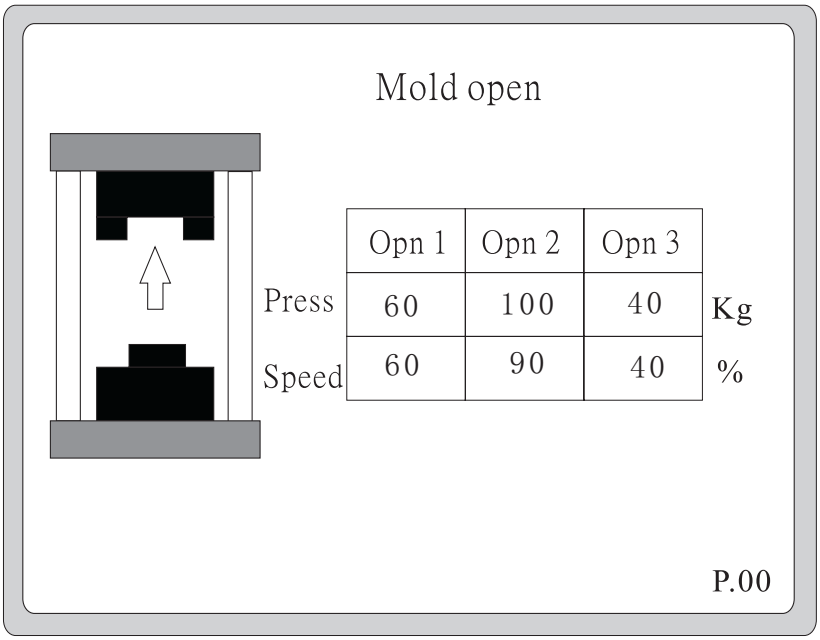
Increase to press the direct

Didn't arrive and should lock the mold pressure in that time after automatic apperance descend close the mold to terminate since the alert lock mold pressure shortage

switch mold



Press two times



Note:

Pressure:

Set in the this trip opposite the pressure that should act

Flow:

Set in the this trip opposite the flow that should act

Operating instructions:

Press to close the mold key —fats, P、F→ Inj-M Low P 1 ON / Blow -M Low P 13 ON —Protect to press, P、F→ Inj-M High P 7 ON / Blow-M High P 12 ON

Increase to press, P、F → Mold Clamp 23 ON —Fwd, P、F→ Fwd

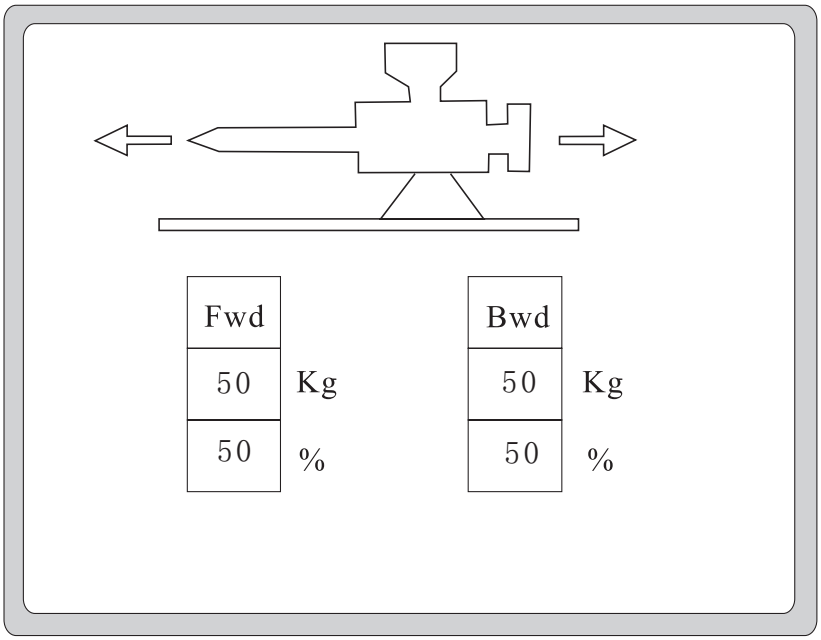
Press to open the mold key —Open before and slowly, P、F→ Inj-M High P 7 OFF / Blow-M High P 12 OFF —fats, P、F→ Inj-M Opn 3 ON / Blow-M Opn 1 15 ON

Back slowy andsoon, P} F → Inj-M Opn 2 2 ON / Blow-M Opn 2 14 ON → Opening the mold finishes

SHOOT AN UNIT ENACTMENT

Shoot

Press once



Note:

Pressure:

Set in the this trip opposite the pressure that should act

Flow:

Set in the this trip opposite the flow that should act

Operating instructions:

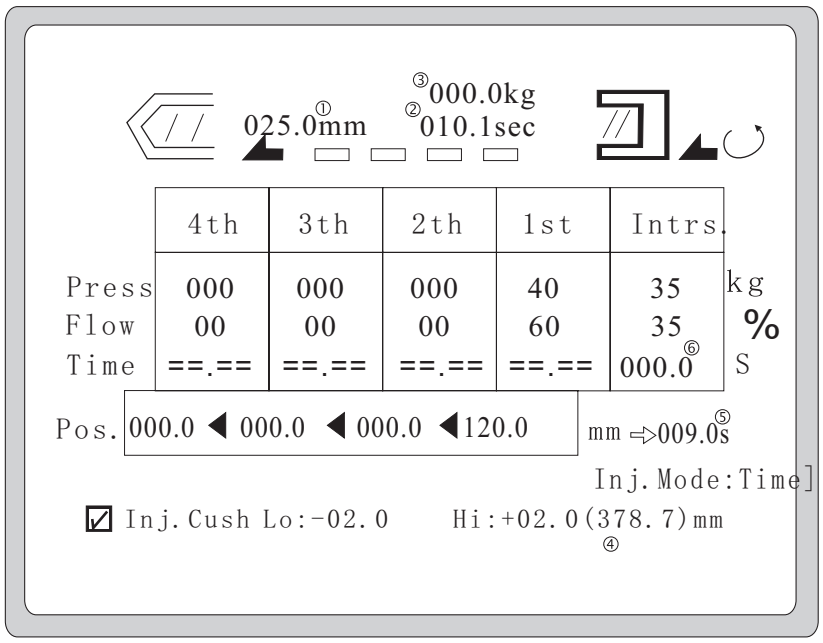
1.Moving the appearance descends to press to shoot to enter the key，while diding not run in to shoot to terminate the switch，the performance shoots to enter the pressure 、flow，while running in to shoot to enter to terminate the switch,shoot to stop

2.Moving the appearance descends to press to shoot to back the key，while diding not run in to shoot to back to terminate the switch，the performance shoots to enter the pressure 、flow，while running in to shoot to enter to terminate the switch,shoot to stop

3.Automatic appearance next，be to run in to shoot to enter to terminate the switch，enter to project the route of travel

Injection

Press once



Note:

① Shoot the position manifestation

② Shoot the time manifestation used

③ Shoot the pressutre the actual manifesation the value

④ The shoot terminates to position of preparing establishing value

⑤ The direct that shoot time，at this time inside if the not yet finished shoot，stopping the shoot，turn into next act，please watch for to adjust at this time，should is big in the product at this time product total time of the projection normally

way

The eligibility choose time or posotion to control the projection

Shoot to anticipate to check

The examination shoot of terminate the fixed position; can set the deviation value of this position，this posotion of enactment the shortage of the spillage that the influence shoots to anticipate (is shown as diagram above: shoot to anticipate to check of allow the scope is 20-30 itses)

Add again to anticipate

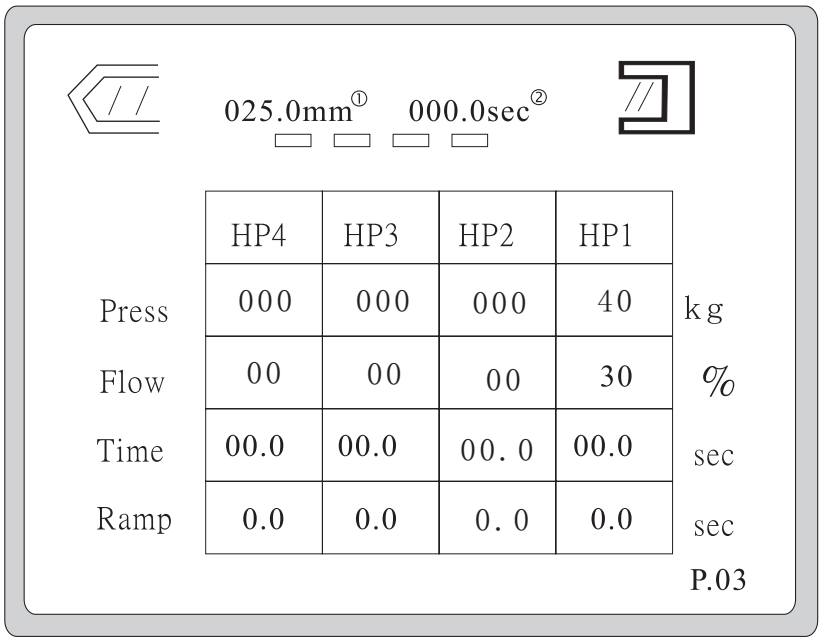
Point before shoot whther adds to anticipate, if establish to 0 in this position the don't add to anticipant, establish to 2 sec to carry on willing add 2 sec to anticipate each time

Fixed position

When shoot operate : be to 120 posotions by 1 the segment turns 2 segment ,80 this positions will by 2 the segment turn 3 segment, from here the type pushes until the shoot terminates the position (25) note: if a certain shoot does not use to establish the segment's position to 0 since can

Injection

Press two times



Note:

① Shoot the position manifestation

② Shoot the time manifestation used

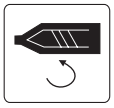
Time

Pointing each stage protects to press time

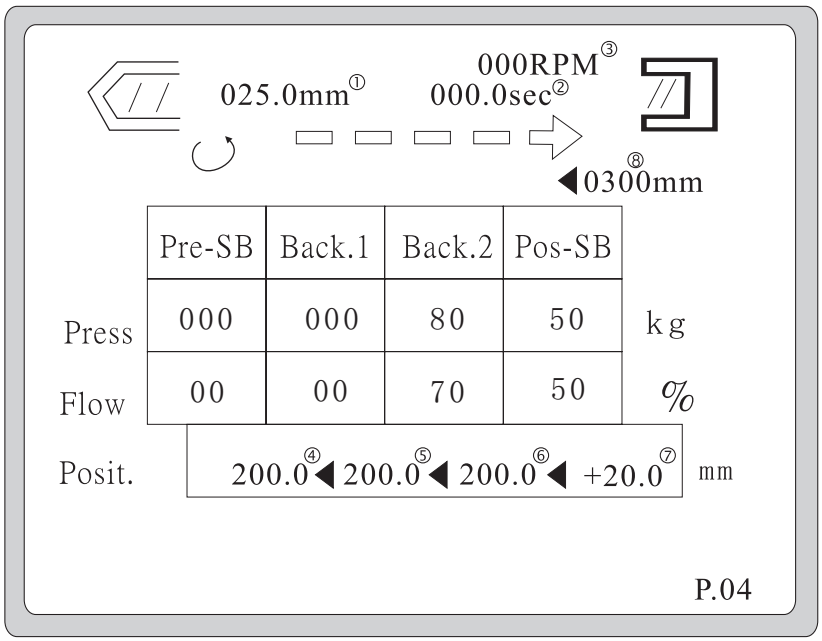
The inclined rate goes

The pressure(flow) value is smooth to cut over to anther time of pressure(flow) demand with a kind of pressure (flow) , as above diagram: protect two (time) 10 and 0.5 be in to protect two stages , has been protected a pressure (flow) to run to protect two pressure 0.5 sec (flow)

add to anticipate



Press once



Note:

① Add to anticipate the position manifestation (actual value)

② Add to anticipate the time manifestation used

③ Add to anticipate to turn to show soon

④ Before defended overflow anticipate turn add anticipate one position (eatablishing value), if do not need to before defend overflow anticipate is worth this set to 0 ,if use this function will before overflow anticipate the enactment number waited, being doing add anticipant action

⑤ Add to anticipant 1 the segment turns 2 positions , if only uses a the segment adds to anticipant , please is worth this to set 0

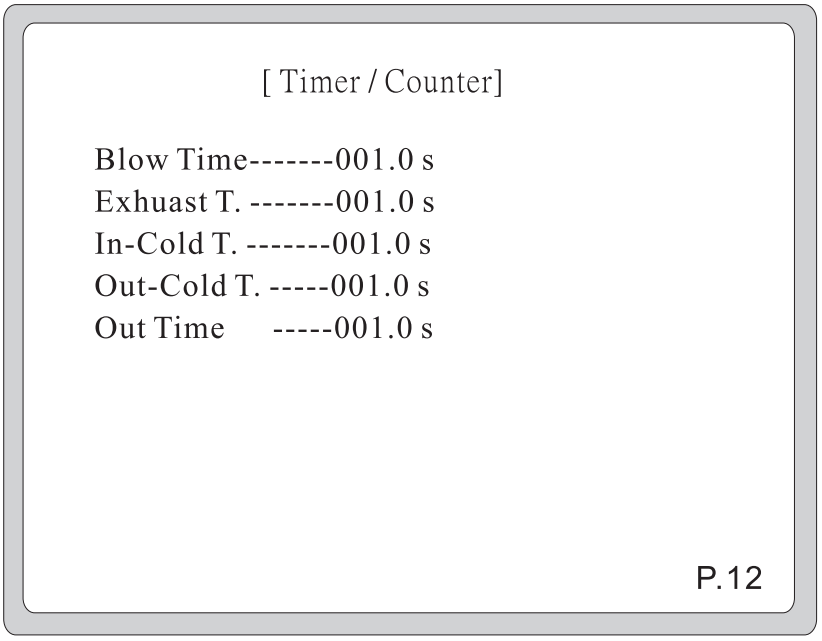
⑥ Add to anticipant to end the position

⑦ Behind defend to overflow to anticipant, add to anticipant to terminate in segmnet 2 position up , at the distance that stay back , as: up the diagram defends to overflow to anticipant after defending to overflow to anticipate the position as (200+20) 220mm if don't using , please set to 0

⑧ Shoot、add to anticipant the electronics a biggest distance

Time

Press once



Note:

Blow breath time : blow breath time of acting the work (establishing value)

The row annoys time : put time of annoying the action inside (establishing value)

Inside cold time : inside time of the cold action work (establishing value)

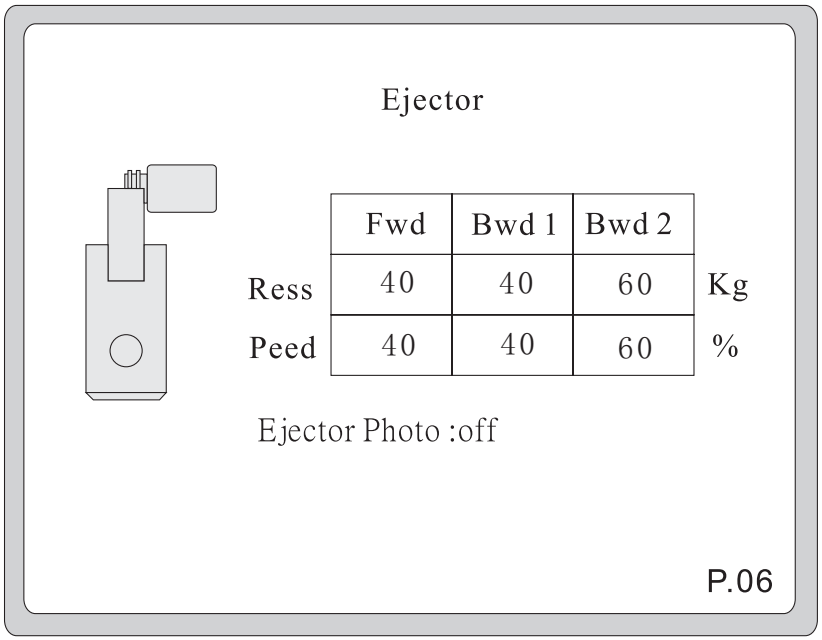
Outside cold time : outside time of the cold action work (establishing value)

Cool off time : cooling-off work time (establishing value)

THE EJECTOR UNIT ENACTMENT

Ejector

Press once



Note:

Operating instructions

Manual state descends to escort the ejector back the key , carrying out the ejector backs 2 of pressure flow , stop the action while ising to run into the ejectorback to terminate the switch。

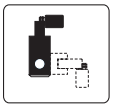
Movesing the pressure flow that the appearance descends to press the ejector key performance ejector into ,when runs into the ejector to terminate the stop action 。

Carries out when automatic apperance descends the first-time ejector back the ejector backs 1 of pressure flow , be to run into the ejector backs 1 stop action the switches to carry on the row spirit ,the row annoys to time is up to carry on the ejector backs 2 action performance the ejector backs 2 of pressure flow be runs into the ejector back to terminte the switch action complete。

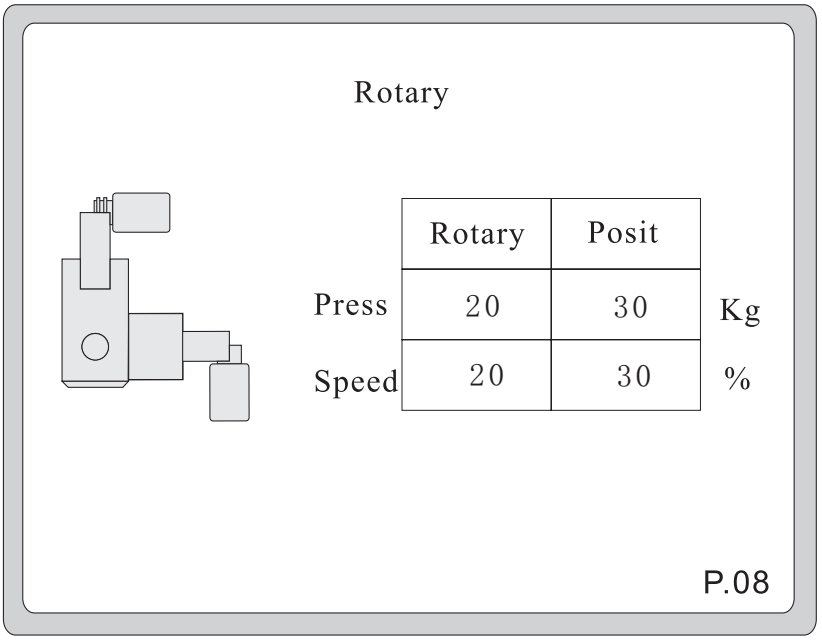
Ejector electric eye

At the ejector electric eye chooses to use, then carry on the ejector action to check no.22 ejector electric eye , if have the signal importation then can't ejector , the alert electric eye covers

Rotary



Press once



Note:

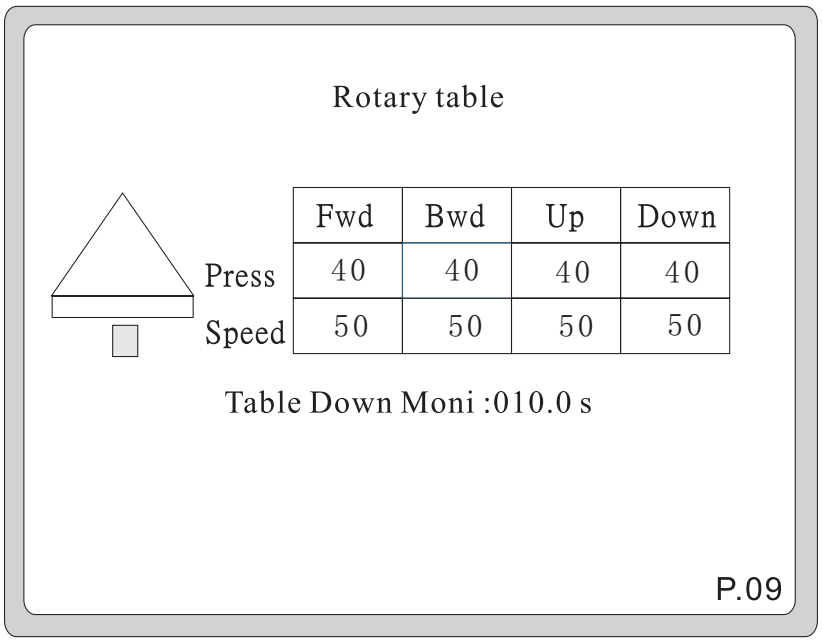
Operating instructions

Manual state descends to press the rotary key , carrying out the rotary pressure flow , releasing the stop action of the key

Be diding not press the rotary key , and having no under the condition of action the pressure flow that the system outputs to return to fixedly

Botary table

Press once



Note:

Operating instructions

Manual state

Be turning the condition that a rising terminates:

Press to rotary table the pressure flow of carrying out the turn-over , be to run in to rotary table to go forward of terminate the switch, stop the action 。

Press the pressure flow of sending back the key performance, be to run in to turn round to retreat of terminate the switch, stop the action。

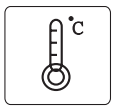
Be turning round the condition of:

Press the pressure flow discharge of rising the key performmance rising, be to run in to rotart table to rise of terminate the switch , stop the action

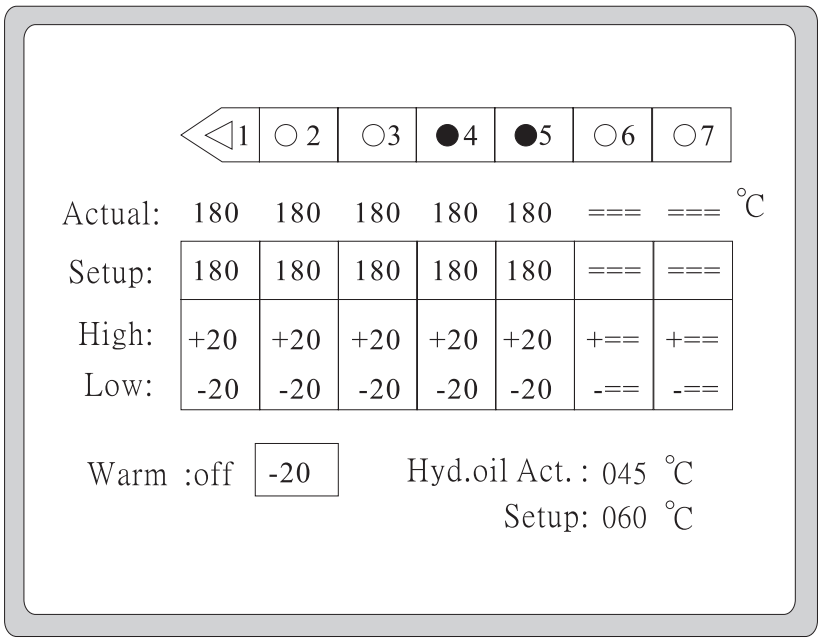
Press down to decline the pressure flow that the key performance descends , be to run in to turn the set to descend of terminate the switch, stop the actoin

Rotary table the descends the direct : rotary table the set under the automatic appearance and did not descend in that time, the alert turns the set to descend the direct to time is up ,carrying out to rotary table rising action

Temperature



Press once



Note:

Value now

Value now for 1-7 of temperatures

Establishing value

Set 1-7 segments temperatures

The upper limit goes:

The upper limit difference in temperature of the temperature,if the temperature of now is big to add the error margin upper limit the alert temperature to then lead in the establishing value high

Descending the limit goes:

The temperature descends to limit the error margin, if now the temperature is small to reduce the error margin to descend the limit the alert temperature to then lead in the establishing value low

Heat preservation:

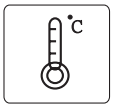
While using , will depend on the establishing value to turn down the temperature currently (For example: the heat preservation value -30 , the temperature each original value is 200 constant, but the computer reduces the heat automatically 170)

Oil:

The oil is worth now if high is an alert oil abnormality in the establishing value then

TEMPERATURE AND PREPAR THE HOT UNIT ENACTMENT

Temperature



Press two time

Note:
(After choosing the automatic switch machine function appearance just valid)

① Switch on automatically function enactment

② Switch on automatically time enactment

③ Shut down automatically function enactment

④ Shut down automatically time enactment

⑤ The date show and can modify

⑥ Prepare the hot function choice

⑦ Time show and can modily

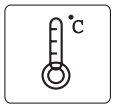
【PRE-HEATING SCHEDULE】

Function:off ⑥

⑤2001/07/10 Day:Fri 15:20:04 ⑦

Day	Sel. ①	On Tim ②	Sel. ③	Off Ti ④
Mon	ON	7:30	OFF	17:30
* Tue	ON	7:30	OFF	17:30
Wed	ON	7:30	OFF	17:30
Thu	ON	7:30	OFF	17:30
Fri	ON	7:30	OFF	17:30
Sat	ON	7:30	OFF	17:30
Sun	ON	7:30	OFF	17:30

Temperature



Press three time

⑤The choice uses or don't uses the male mold heat preservation function

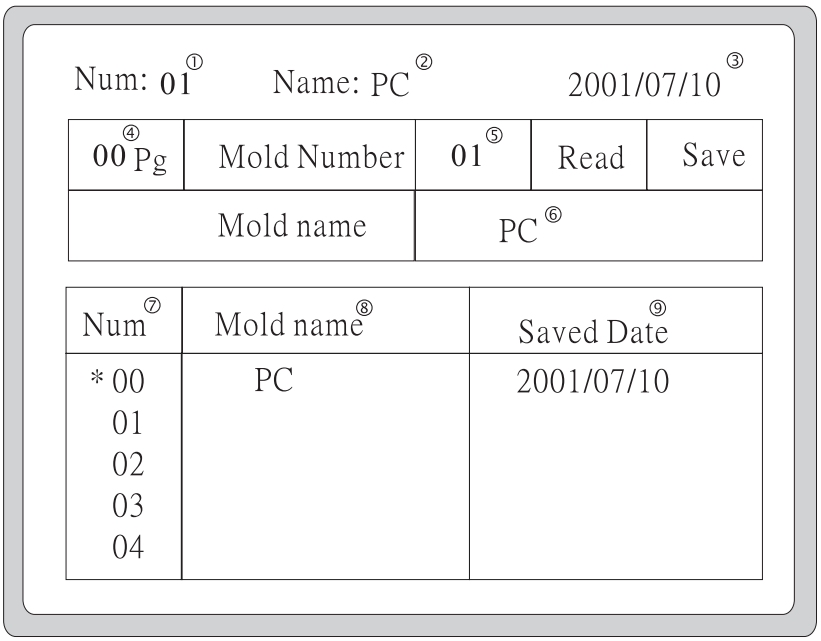
⑥ The choice uses or don't uses the female die heat preservation function

【Mold Temp. Function Setup】

	○Move	○ Fix
Funct.	Off ⑤	Off ⑥
Actual.	080	080
Setup	080	080
High	+ 20	+ 20
Low	- 20	- 20

THE DATA MEMORY SETS THE PAGE

模具記憶 MEMORY Press once



Note:

① The mold number that use currently

② The name mold that use currently

③ The date that the molding tool parameter that uses currently deposits

④ (00 pages) point the page yard cursor to move to go to use here⊕、⊖the key can check the molding tool data of the each page, the convenience scarches to deposit time,name etc

⑤ The molding tool serial number--be reading here or inputing the molding tool serial number

⑥ The molding tool name --can it the english name that inputs the molding tool here, in order to look for , also can abridge and donot input

⑦ Show for the serial number of each molding tool

⑧ Show the name of each molding tool, the molding tool data while depositing if the importation name, then will show here

⑨ Showing each module deposits time

Ps: this system can deposit 50 sets of molding tool paramenters(serial number 49 establish the vaule for the preparing or inner part,can't save) , can enlarge another exterior memory card (make choice of purchase)

The data deposit,read the setup:

The parameter save

Input the mold tool serial number(00..48) ⇨ Input the molding tool name(pc) ⇨ Save

Can abridge

The parameter reads

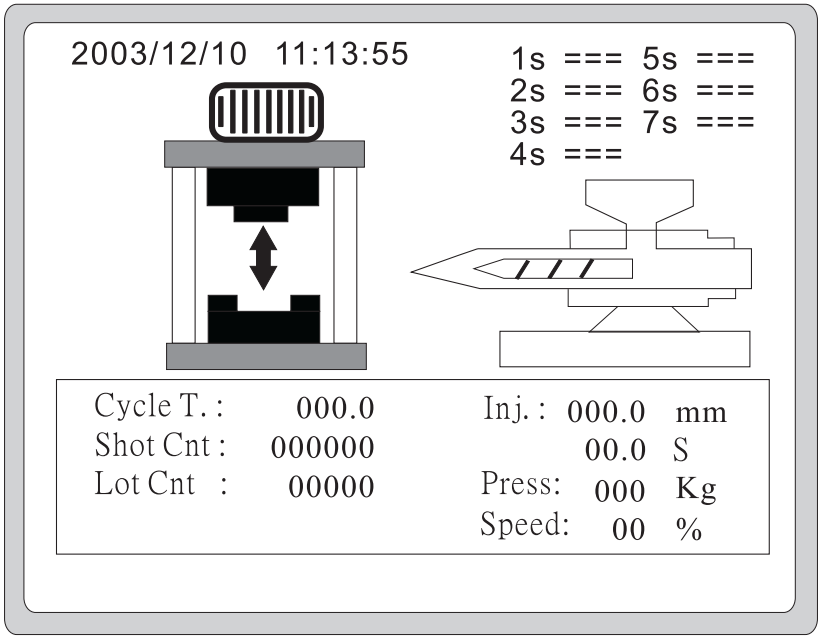
Input the mold tool serial number(00..48) ⇨ Input the molding tool name(pc) ⇨ Read

Can abridge

Search:

50 sets of memorieses divides into the 10 pageses to show at the screen the underneath, can carry on the fast search in the page yard importation page yard(or the exploitation adds and subtracts the key) ,as: input 06 press the enactment key , enters the name that page 6 shows 30-34 five sets of mold numbers and deposit the date,if had before the ordinal number of the serial number row* the number indicated this module to deposit the data

動畫監視 MONITORING Press once



Note:

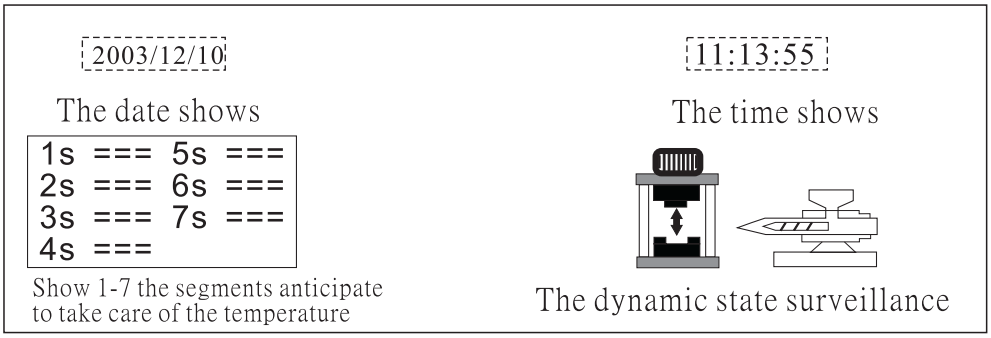
Whole weeks account: work an use circularly of time

The finished product totals:the total amount that produce currently

The finished product is small to account: be on duty the quantity of the production

Shoot item:shoot the electronices meter currently the position,with time that shoot use when acting

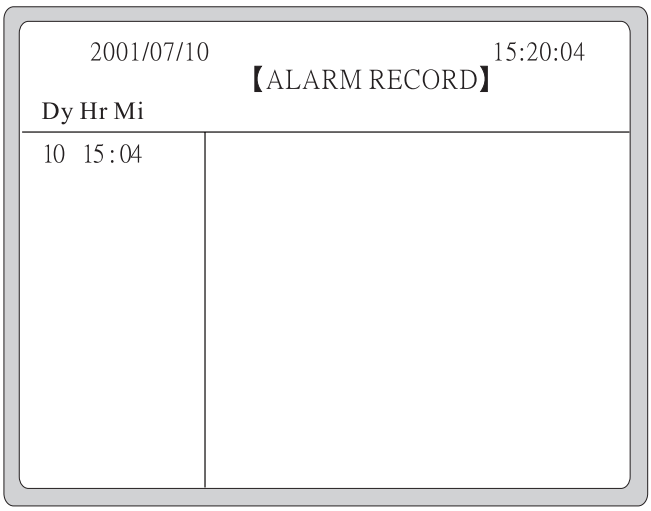
Pressure 、flow item: currently operative pressure flow



THE ALERT RECORDS,I/O KEEPS WATCH ON

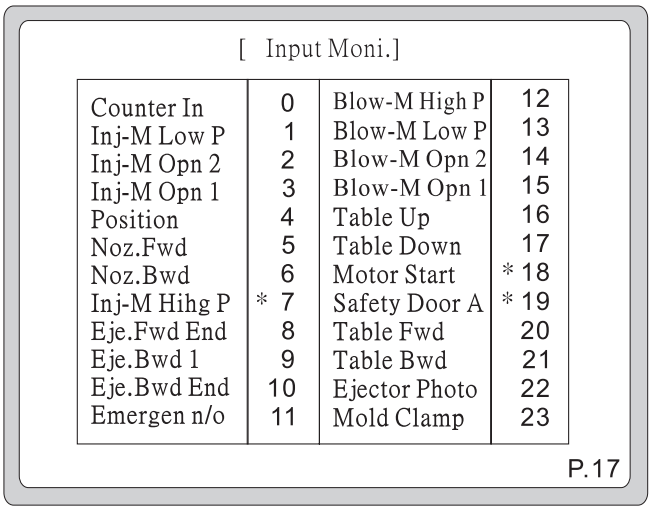
動態監視 MONITORING Press two times

Note:can record the last ten times of alert record,the convenience maintains the search



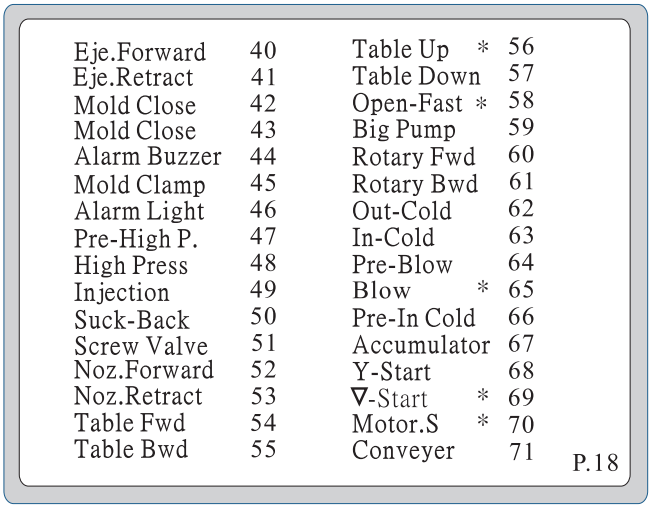
動態監視 MONITORING Press two times

Note:manifestation * indicate to have the signal input



動態監視 MONITORING Press four times

Note:manifestation * indicate to have the signal input



生產管理 QUALITY Press once

【PRODUCT MONITOR】

	Shot Cut	Good	Reject	Lot Cnt
Curr	005001	004999	000002	00001
Set.	010000			01000
①	Reset	Reset	Reset	Reset

Moni.:off	Inj.End	Inj.Time	Scr. Time
Standard	025.0mm	020.0s	010.0s
Error	±01.0mm	±00.5s	±00.2s

Note:

Quality control:
Direct to use or not the thing tube keeps watch on

Value now:
The this trip indicates the current production quantity

Establishing value:
The this trip can set the quantity of planning the production , if set to 0, then the production quantity is free from the restrict ,since not alert

Standard value:
The this trip is a qually control surveillance reference to be worth,setting this value to ask reference to be worth equally

① The cursor moves to the this trip (return zero) position to press the enactment key, will to is worth to return in response to now of row sero

生產管理 QUALITY Press two times

【SHAPE RECORD】

Pg:0 ☐ Reset Injection:025.0mm

Cnt. Nr	Tcyc sec	Tinj sec	Pinj mm	Tscw sec	Pscw mm
000000	000.0	000.0	000.0	000.0	000.0
000000	000.0	000.0	000.0	000.0	000.0
000000	000.0	000.0	000.0	000.0	000.0
000000	000.0	000.0	000.0	000.0	000.0
000000	000.0	000.0	000.0	000.0	000.0
000000	000.0	000.0	000.0	000.0	000.0
AVG	000.0	000.0	000.0	000.0	000.0

Page:0
The cursor moves to this position, pressing + 、-key, the finished product record the data and will ascend to move

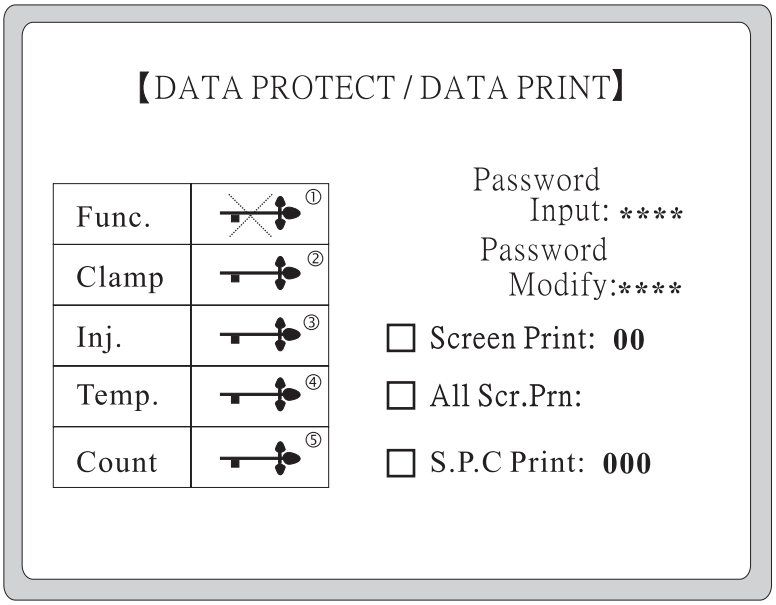
Injection:025.0mm
Point the last injection position of product

Average:
Point 60 average values that model the data

(Note: this pointing page can record 60 pens to model the data totally)

THE DATA PROTECTS AND PRINTS OUT

生產管理 QUALITY Press three times



Note:

(Want to enter this painting page to protect in the page , input the quality control password , just can modify the initial value for the first time password to 0 , if have the password to forget , please inquire the machine the personnel)

Indicate the data to be locked , can't modify

Indicating the data has no lock , can modify

The choice painting page prints out: ☑

Pointing can choose the any painting page to carry on printing out

The whole painting page paints out: ☑

Pointing can print out the all of the painting pages

①Target or open all function optionses, as : the ejector usage

②Target or open the switch mold、try the mold 、ejector、blow breath、the parameter modification of the pressure 、flow、time、fixed position within the neutron painting page

③Target or open the injection、hold pressure 、screw rotate 、inj.unit, pressure、flow、time fixed position within a painting page 、number of times etc. the parameter modiftes

④Target or open the tempreature and prepare the hot painting page in the modification of each parameter

⑤Target or open to account the chronometer number painting page in the modification of each parameter

THE SPECIAL FUNCTION ENACTMENT PAGE

生產管理 QUALITY

Press four times

【SPECIAL FUNCTION】

Screw RPM		00 Nr/W
Lub. Pump	Off	1000 Nr 10.0 s
Air Door	Off	Cl.05.0 Opn.05.0s
Unmanned	Off	060.0s
Relea.Spray	Off	100 Nr 10.0 s Delay: 03.0 s
Press. Test	Off	035 kg 35%

(Note:need to protect the page importation in the data of the right password can enter this painting page)

Note:

Screw RPM the choice uses or don't uses 1RPM tooth inputting screw rpm to each time here is counted

Lub.Pump 0100Nr after pointing the switch mold 100 times , will carry on lubrucating the processing to the molding tool

05.0s point each time the establishing value of lubrucating the molding tool time

Air Door close 05.0s point to close time of air door need

open 05.0s point to open time of air door need

Unmanned while choosing the usage, if appear to break down the alert occurrence after, stop the motor and electricity the heat after carrying out this the enactment time

Relea.spray 100 mold after pointing the switch mold 100 times, relea.spray the mold automatically

10.0s relea.spray the mold a time establishing value each time

relay : make to spray to leave the action after delaying at this time

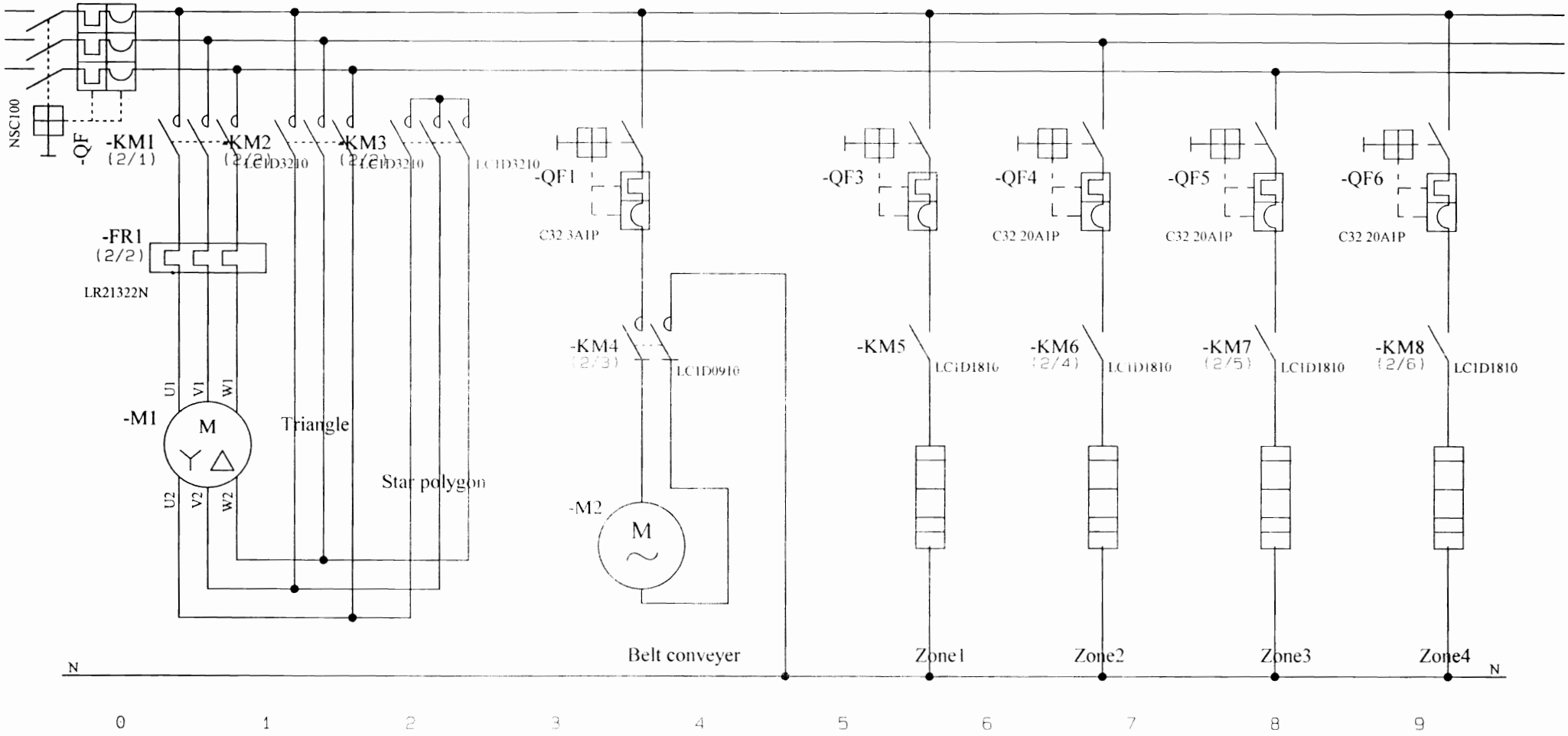
Pressure test 035bar pressure to test is worth 35% flow value of pressure to test

Automatic operating instructions

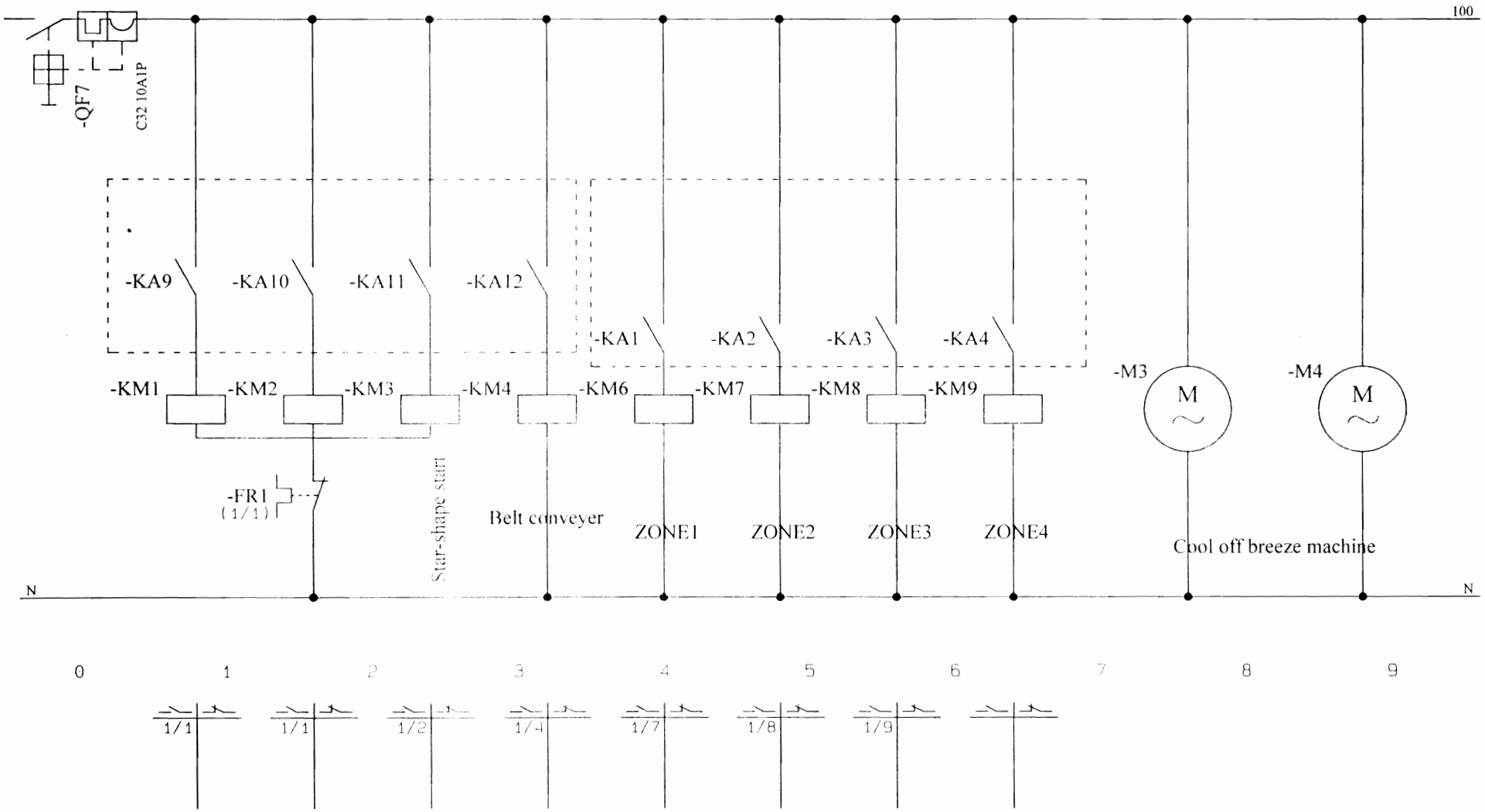
- choose the usage: a period of time that take place the alert, will slice the motor and electricity the heat automatically
- choose the don"t use: a period of time that take place that alert, will slice the motor but electricity the heat automatically not stop

TROUBLE AND EXPEL THE METHOD

mistake hints	trouble reason	expel the method
*No Connect I/o Board or Damage	*15 lines insulate the line to break the line or loosen to move *I/O board AC 15V power trouble *I/O board trouble	*Checking 15 lines insulates the line and electric outlet *Check the AC 15V power conjunction condition *Change I/O board
*The screen would is bright, but not show the writing *The screen is not bright, the writing gets dark	*LCD display trouble, or the conjunction loosens to move *Cpu board trouble in a back light board	*Check the electric outlet or change the LCD display *Need to change the cpu baord
*Escort to act have the pressure flow ,but have no action the exportation *Output the singnal beacon not bright *Input the singnal beacon not bright	*DC24V power has no 24V *I/O board inserts PIN and comes off *Check input and output has no short circuit	*Check 24V power has no DC 24V exportation *Checking the 24Vpower has no short circuit ,the short circuit expels after, send the electricity automatically
*Each temperature is worth now, showing is 000	*I/O board DC-DC(U16) trouble	*Check DC-DC(U16) loosens to move or not
*Motor no start	*Motor key is off *Motor start singal 18 is off	*Motor key must is on *The motor did not start or 18 number did not input
*Heart stoping	*Heart key is off	*Heart key must is on
*Over Lot count	*The finished product totals to be worth to arrive the establishing value now	*Ask quality cintrol to keep watch on the page, total of return zero files to press the enactment key, and return zero(if don't use the finished product totally, please establish to zero total establishing value)
*Over Pre-shot count	*The finished product is small to account to be worth to arrive the initial value now, the alret is several, returning automatically zero	*Ask quality control to keep watch on the page ,small account of return zero files to press the enactment key ,and return zero(if don't use the finished product small account ,please establish to zero total establishing vaule)



The main back track connects line diagram	用户:	设计:	设计方案号:
	设计方案标题: MSZ25出口	审核:	修订:
	页标题:	创建时间: 2002-6-7 13:11	参考:
		上次改动: 2006-9-2 10:29	页 1 共 5



Control the back track connects line diagram	用户:	设计:	设计方案号:
	设计方案标题: MSZ25出口	审核:	修订:
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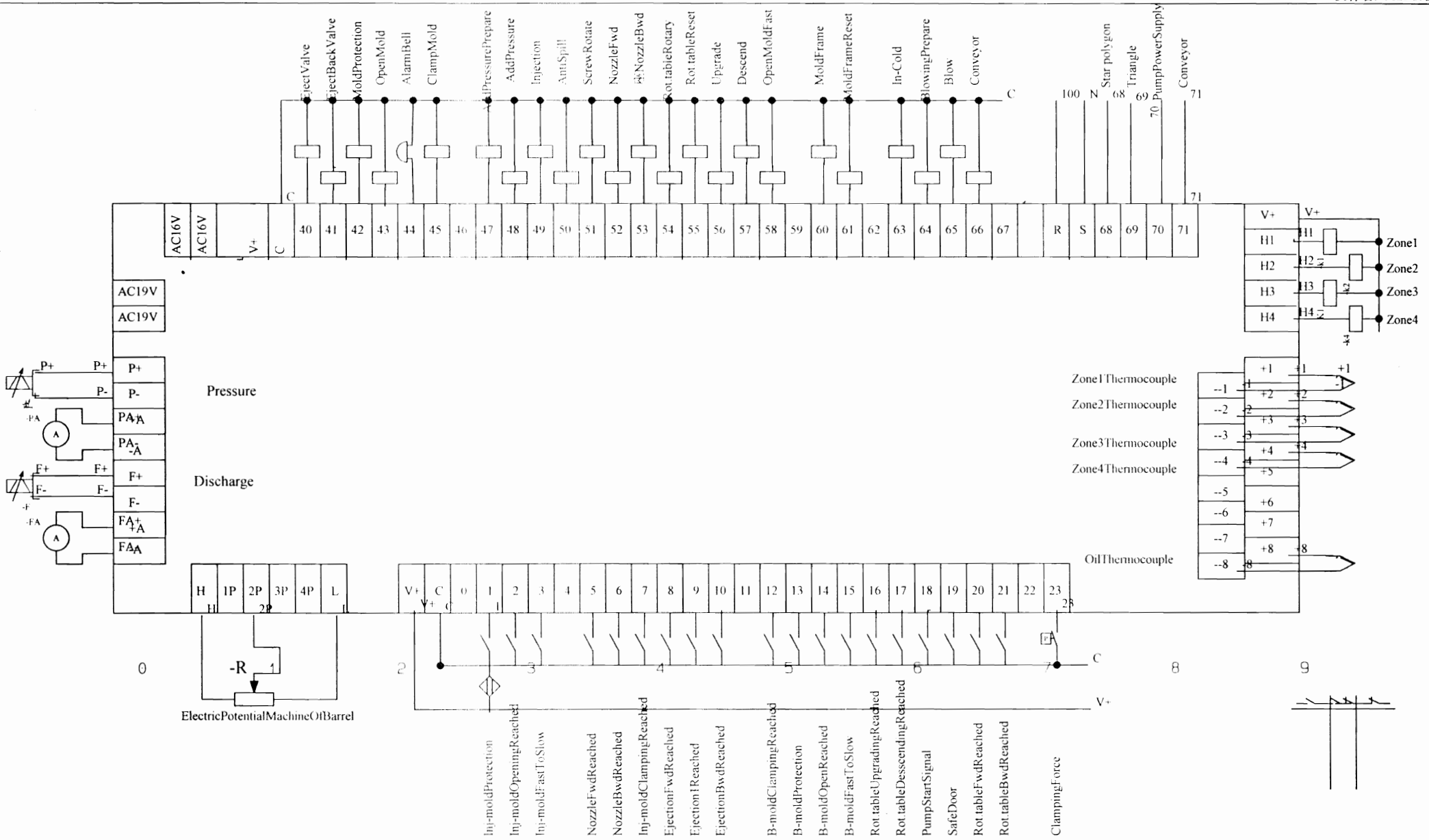
		上次改动: 2006-9-2 10:30	页 2 共 5



The computer controller connects line diagram	用户:	设计:	设计方案号:
	设计方案标题: MSZ25出口	审核:	修订:
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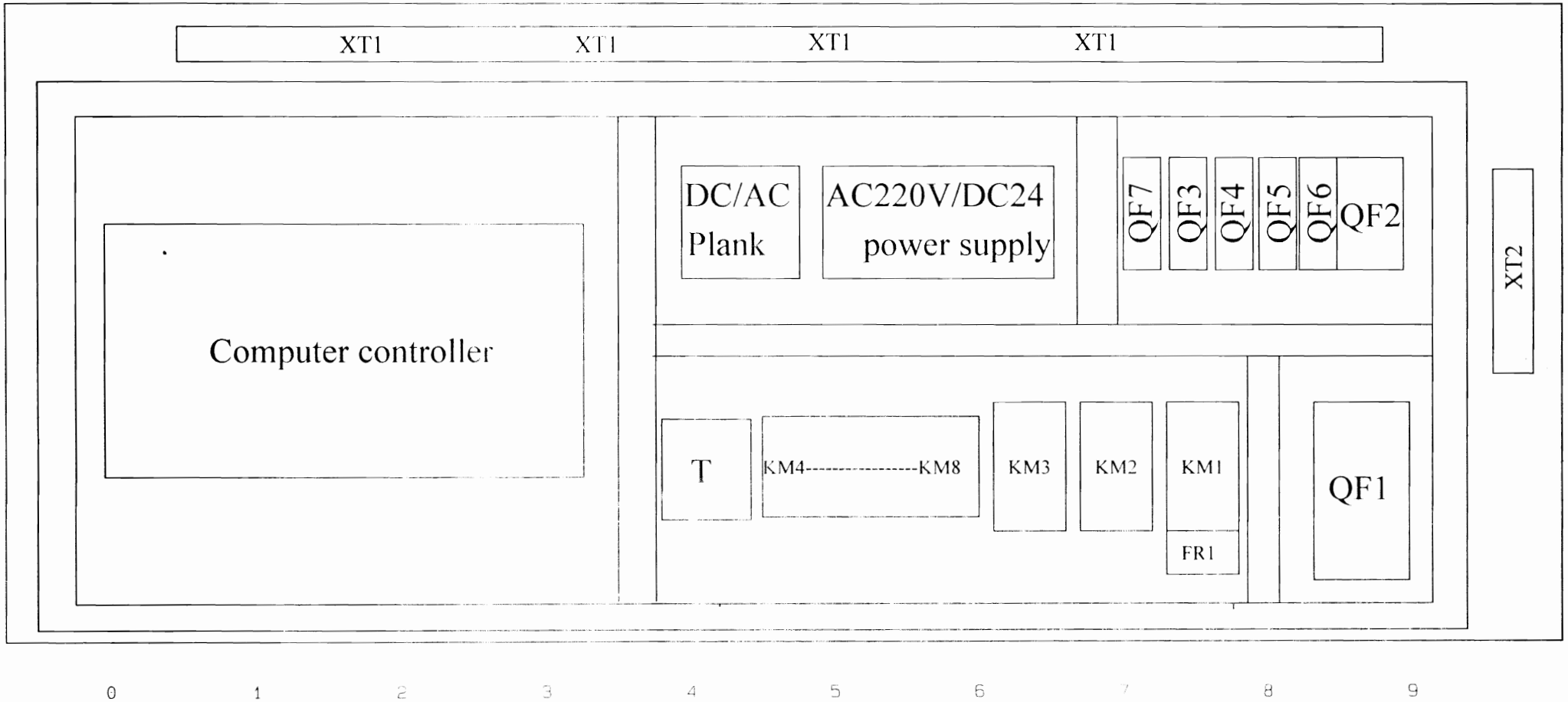
		上次改动: 2006-9-2 10:24	页 3 共 5



The component row cloth diagram	用户:	设计:	设计方案号:
	设计方案标题: MSZ25出口	审核:	修订:
	页标题:	创建时间: 2002-6-7 13:11	参考:
		上次改动: 2006-9-2 10:16	页 5 共 5