MPC 4.0

Multi-functional Computer

Operation Manual

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ChenHsong Machinery(ningbo)Co.,Ltd.

Chen Hsong MPC40 Multifunction Computer

Features:

Imported from Japan, MPC40 PC is compliance with all types of JIS inspection standards. Equipped with a 640 x 480 colorful extra-large LCD screen, it has a wide operating voltage range: AC 110V~AC 280V 50/60 Hz, plus ultra high stability. The data stored may be kept for 5 years or above under the condition of power failure.

Chinese, English or Japanese language can be freely selected and they can be switched over from one to the other, facilitating learning to operate the computer.

Basic performance ：

1. Enlarged memory which may store 150 sets of mold information (e.g. time, counting times, pressure, speed, stroke, quantity, mold thickness, explanation of mold number, conditions for selection, barrel temperature. All data can be stored either in floppy disk or PC alternatively

2. Data lock function prevents unauthorized access and mistaken amendment.

3. Detailed online operation instruction and multiple user management.

4. Temperature holding of nozzle: heating time setting for the nozzle with up to 100% temperature being maintained, or control in PID way.

5. 8-stage PID temperature control with an adjusting range of 30℃—500℃, with K type thermocouple.

6. Cold start prevention, automatic preheat function.

7. Alarm setting on the control of high and low oil temperature and breakage of the thermocouple cable during running is available.

8. Automatic detection of blocked nozzle and material overflow

9. 10-stage injection speed, 10-stage injection pressure and 10-stage holding pressure.

10. 10-stage plasticizing speed, 10-stage plasticizing pressure and 10-stage back pressure.

11. 3-group pneumatic ejection setting and 3-group core pulling setting

12. High-accuracy electronic ruler used for clamping, injection and ejection.

13. Data input error prevention and prompting.

14. Production volume setting for auto-stop function

15. Super lubrication setting for toggle unit, setting of the frequency of lubrication form mechanical links and alarm for lacking in oil.

16. Operation diagram display for monitoring operating process of the plastic injection machine

17. Diagnostic function can check the status of 48 input devices, 48 output devices, as well as monitoring 100 timers and 32 counters.

18. Mold data can be overwritten or deleted freely. Default mold data can be selected to save time.

19. Using the most advanced SMT for the I/O board.

20. Using two Intel IC with 32 bits.

MPC40 is a new generation product of Chen Hsong with even more powerful function. Comparing with CH-3.8PC, MPC400 is equipped with newer hardware and more enhanced software.

FUNCTION	MPC40	CH3.8PC
LCD display	640×480	320×240
Plasticizing control	10-stage speed, pressure, back pressure and free switch over	2-stage speed, pressure, back pressure control
Injection control	Holding 10-stage speed, pressure and back pressure settings	Holding 5-stage injection speed and pressure, 2-stage back pressure settings
Opening/clamping control	5-stage speed and 5-stage pressure	3-stage speed and 3-stage
Location control	4-stage liner input (clamp/injection/ejector/ejection chassis)	3-channel decoder (clamp/ejection chassis/ejector)
Gas-assisted injection	Yes, with 6-stage pressure control	No
Real time clock control	Yes, provide clock for preheating control, historical alarm information, and etc.	No

Ratio voltage output	4-stage pulse width modulation and 4-stage voltage output	4-stage pulse width modulation and 3-stage voltage output

Notes: All functions that are described in the instruction manual are not necessarily equipped in the machine. The function of the machine is determined by the standard configuration of the model plus the purchased option device.

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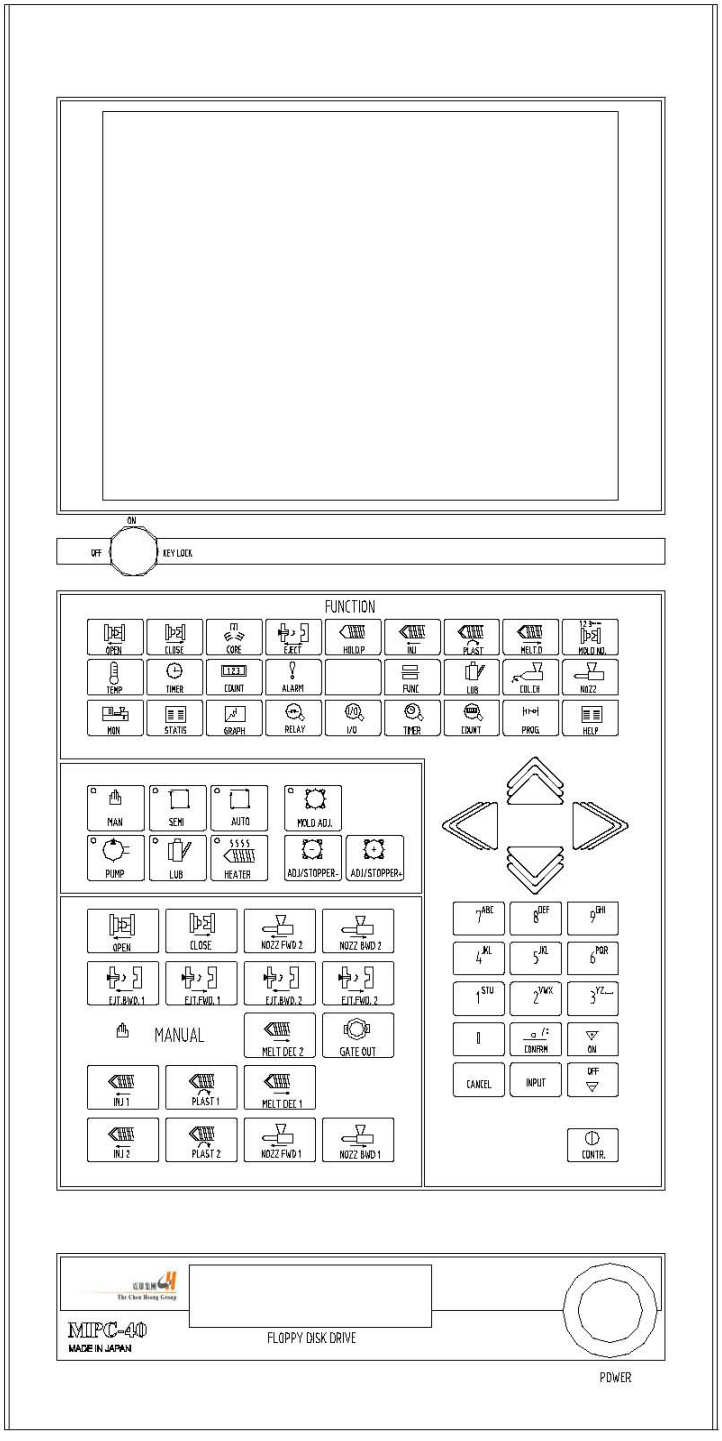
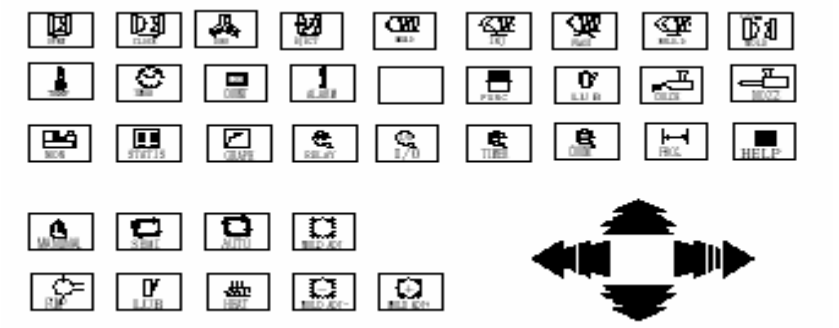
3.1 Introduction on the computer panel

3.1.1 Computer panel

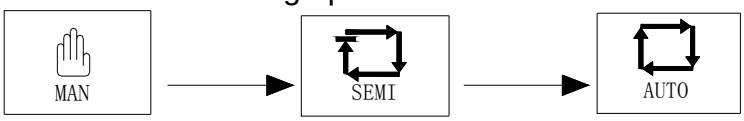


3.1.2 Forming condition control button



The keyboard has the following function:

(1) Select the forming operation status

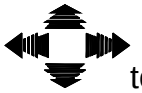


(2) Able to set the location, speed, pressure, time and counter in the forming condition

(3) Able to set the data needed by the auto mold adjustment

(4) Able to amend the mold and overwrite the mold no.

(5) Able to select the function or movement that are needed in the forming as per the need of product and die design

(6) Able to press  to move to the intended location for data amendment under any operation screen

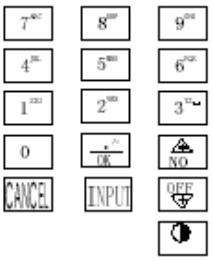
(7)

(8) Mold and auto door operation share the same button. When using the mold adjustment function, you need to switch to the mold adjustment screen at first. (refer to the second chapter for notes)

3.1.3 Forming condition numeric data button

The keyboard has the following function

(1) Input the numeric data that is needed in the forming condition



Speed setting range: 00~99, when setting as 00, the speed is zero

Pressure setting range: 00~99, when setting as 00, pressure is zero

Location setting range: 0000~999.9mm

Time setting range: 0~6553.5 sec

Counter setting range 0～65535。

Mold thickness value range 0～6553.5 mm。

(2) Able to check if the keyboard functions normal or not

(3) Able to read the computer control program

(4) Notes for each button

0 : Number “0” or blank text

1 STU : Number “1” or letter “S”, “T”, “U”

2 VWX : Number “2” or letter “V”, “W”, “X”

3 YZ␣ : Number “3” or letter “Y”, “Z”, “_”

4 JKL : Number “4” or letter “J”, “K”, “L”

5 MNO : Number “5” or letter “M”, “N”, “O”

6 PQR : Number “6” or letter “P”, “Q”, “R”

7 ABC : Number “7” or letter “A”, “B”, “C”

8 DEF : Number “8” or letter “D”, “E”, “F”

9 GHI : Number “9” or letter “G”, “H”, “I”

. /: OK : Reconfirm the data input

+ ON : Turn the function on or increase the value by “1”

OFF + : Turn the function off or decrease the value by “1”

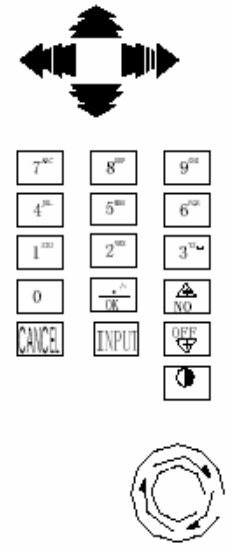
INPUT : Data input

: Adjust the contrast

: Move the cursor to the left

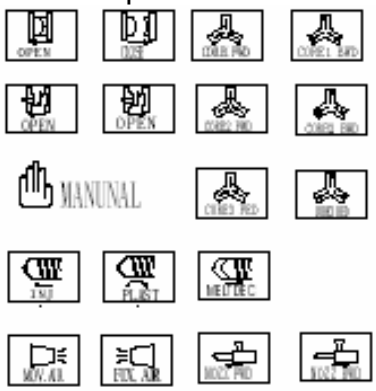
: Move the cursor downward

: Move the cursor to the right




: Move the cursor upward

3.1.4 Manual operation buttons and notes



(1) The manual operation keyboard can independently manipulate a single movement in the whole cycle

3.1.5 Power switch

(1) Emergency stop button

This red button  is located in the right bottom of the operation panel of the computer. Press this button to power off the machine. To restart the machine, you need to rotate the button as per the direction of the arrow to loosen the button.

(2) Start-up button

This green button is located below the emergency stop button. Press this button to power on the control unit of the machine. This function can effectively protect the computer system.

(3) There is a high performance manostat within the machine, which is able to beat the voltage input ranging AC90V – AC265V 50/60HZ

3.2 Instruction on the operation screen

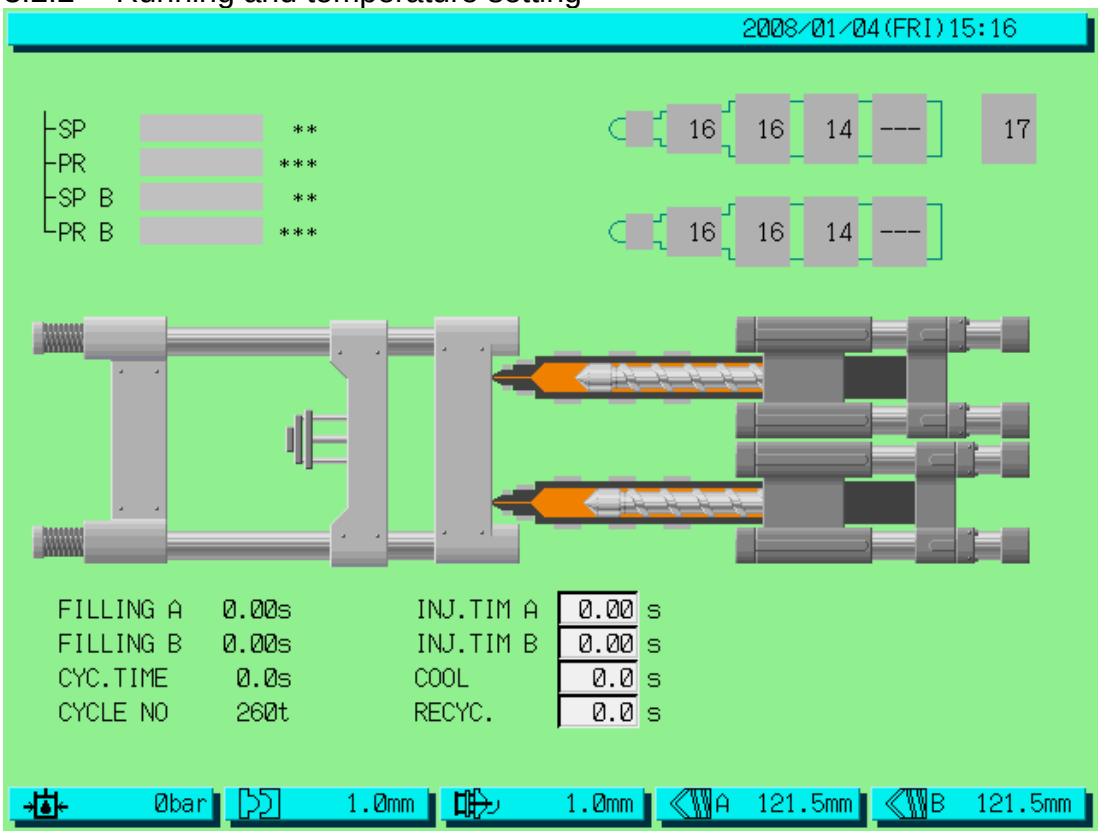
3.2.1 Power on test

Screen 00

(1) Screen (00) appears when the system runs an auto test after power on. This screen shows the machine model, machine no. program, and etc. It is automatically switched to the running screen after 3 seconds.

(2) In case of maintenance or technical inquiry is needed, please advise the machine model, machine no. and program shown above to the customer service staff to obtain fast service.

3.2.2 Running and temperature setting



Screen 01

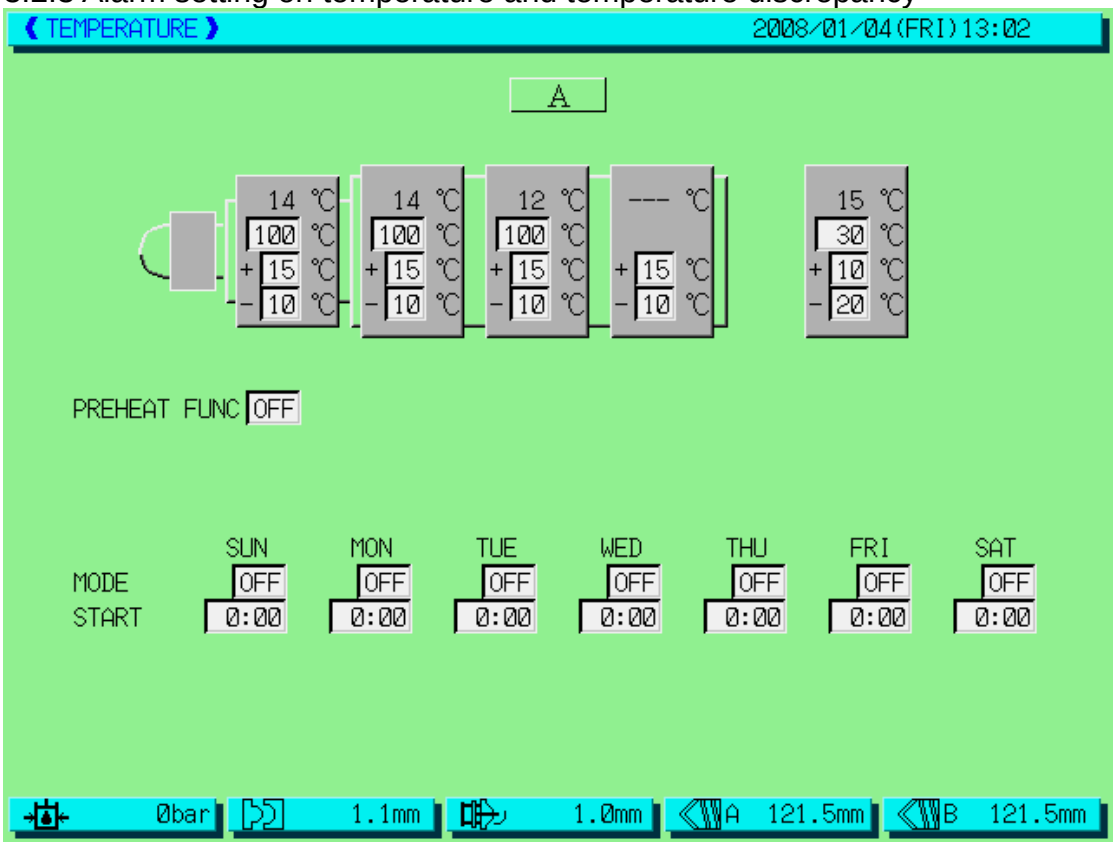
Screen (01) is displayed when running

If you press [MAN] button or [SEMI] button or [AUTO] button, then screen (01) will also be brought forward. You can find various parameters such as filling time, cycle time, formed no., temperature in each stage, and the current operation of the machine. You can also set the injection time, cooling time, and the recycle time by moving the cursor to the corresponding location with  button and input the intended time with the numeric button, followed by pressing [INPUT] button to complete the modification.

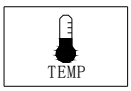
When you activate the parameter to be modified with the cursor button  . The maximum and minimum value of the parameter will be prompted on the screen.

When you activate the function to be modified with the cursor button  . The buttons to be needed to press will be prompted on the screen.

3.2.3 Alarm setting on temperature and temperature discrepancy



Screen 02

Press 

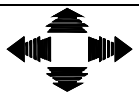
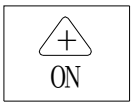
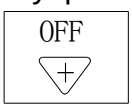
button to bring forward the screen (02). Screen (01) and screen (02) can be freely switched over. In screen (02) as shown above, from the left to the right there are setting on nozzle temperature, 1st stage temperature, 2nd stage temperature, 3rd stage temperature, 4th stage temperature, 5th stage temperature (as needed by the tonnage of the machine), 6th stage temperature (as needed by the tonnage of the machine) and oil temperature. In the setting of each stage temperature, there is alarm setting on the maximum and minimum value. The maximum value can be set to +50 and the minimum value –50. In addition, MPC40 has the function of holding temperature, and setting the time daily for starting the temperature holding.

The setting methods of various function and parameters are as below,

Press 
button to activate the parameter to be modified, then input the intended value and press 

to complete. When one parameter is activated, the input range of it will be shown at the bottom of the screen.

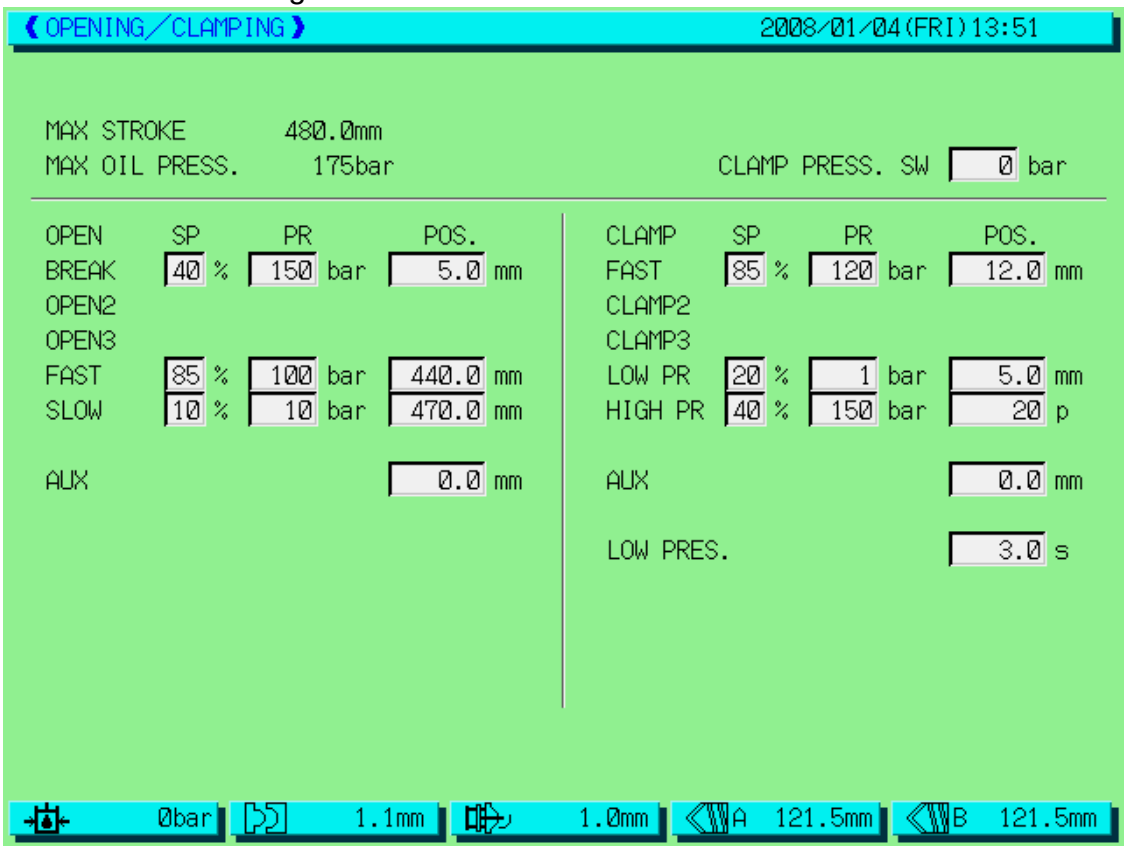
The temperature holding function and daily temperature starting function can

be activated by press  button to get activated, followed by press  or  button to select enable or disable the function.

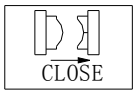
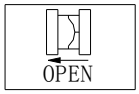
Setting on the group B temperature: press  button and move the cursor to group A till it turns black, then press  and wait the appearance of "?", then just press the confirmation button to set group B temperature.

3.2.4 Parameter setting for opening/clamping

1、Parameter setting



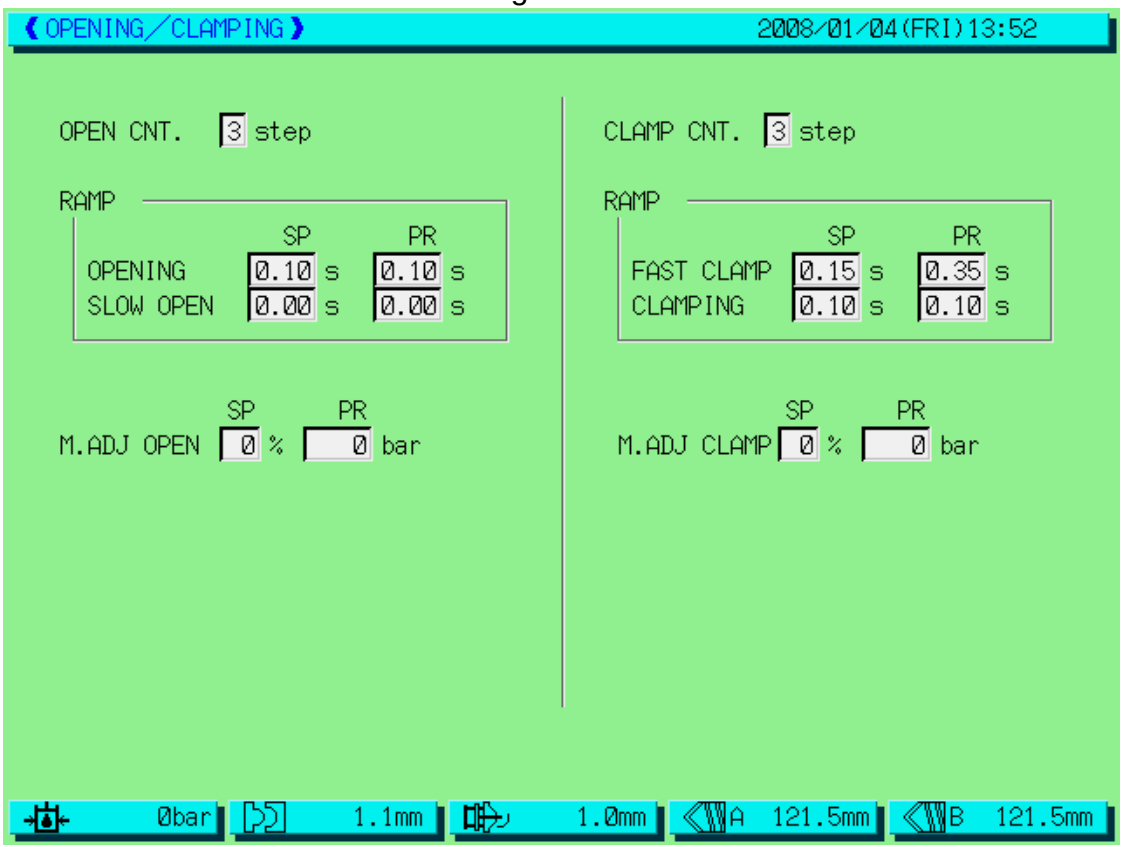
Screen 03

(1) Press  or  button to call up screen (03), in which you can set the speed, pressure and location for all stages of opening/clamping mold

(2) The minimum and maximum stage of mold open is 3 and 5 respectively. 3 stages mean slow, fast and decelerate. 5 stages mean slow, 2nd stage, 3rd stage, fast and decelerate.
Similarly, the minimum and maximum stage of mold clamp is 3 and 5

respectively. 3 stages mean fast, low pressure and high pressure. Press cursor button  to select the parameter setting for mold opening/clamping. Input the intended value followed by pressing INPUT button to complete the setting.

2、Accelerate and decelerate setting



Screen 04

（1）Press CANCEL +  button in screen 03 to call up screen 04, in which you can made setting on the accelerate and decelerate parameter in mold opening/clamping.

（2）The stages of mold opening/clamping can be set here. The maximum and minimum stages are 3 and 5 respectively.

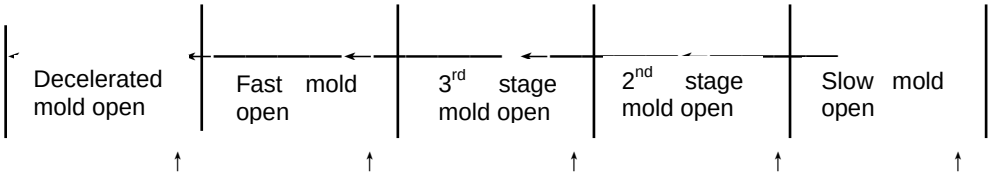
（3）The speed pressure parameter for accelerate/decelerate means the time to be consumed to reach the movement.

（4）To modify the setting, press  button to activate the parameter first, then input the intended value followed by pressing INPUT button to

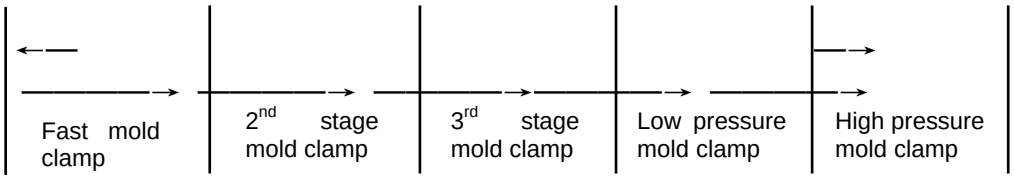
complete the setting.

3、Notes on mold open/clamp time

<1> Notes on mold open time

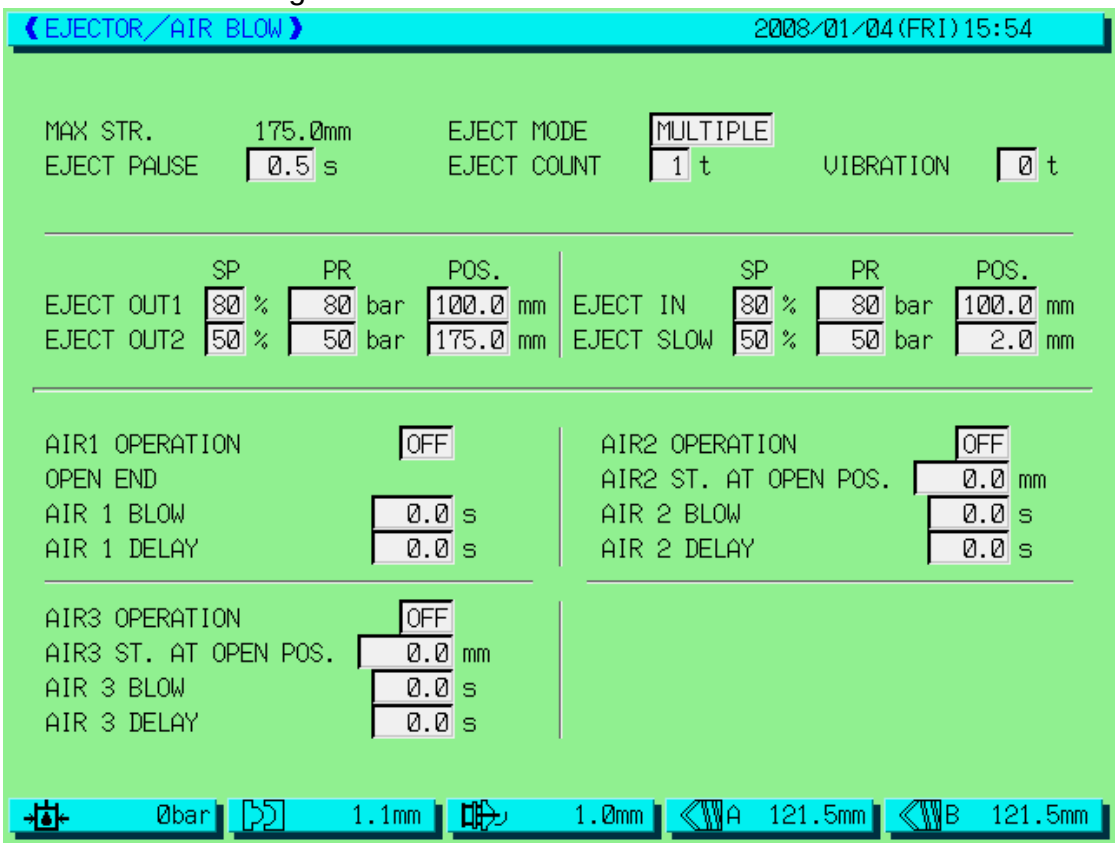


<2> Notes on mold clamp time

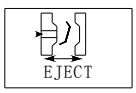


3.2.5 Ejection and air blow

1、Parameter setting



Screen 5

（1） Press 

to call up screen (05). You can set various parameters for ejection and blow.

（2） Press cursor button  to select the parameter setting for

ejection and blow, input the intended value followed by pressing INPUT button to complete the setting.

（3） Press ON OFF button to set the movement style of ejector

（1）No move

（2）Ejector stop

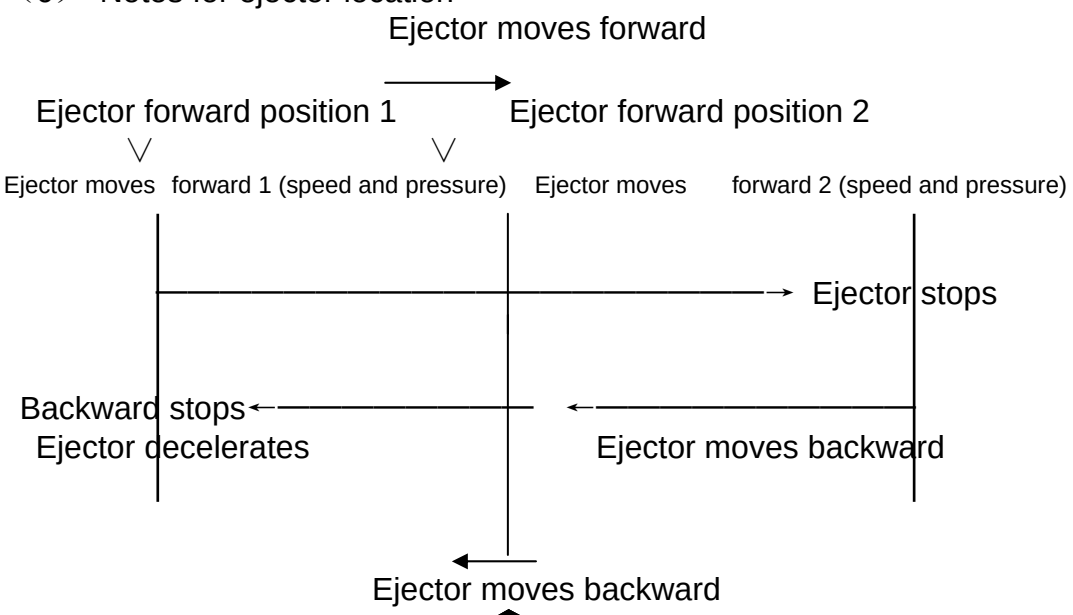
（3）Multiple ejection

（5）Time setting for ejector stop TIM11 (0~99.9 seconds)

（4） Times of ejection CNT04 (0~99 times)

（5） Press cursor button to select ejector forward 1, ejector forward 2, ejector backward or ejector decelerate and etc. Input the intended value followed by pressing INPUT button to complete the setting.

（6） Notes for ejector location



（7） Press cursor button to select blow setting. Input the intended value followed by pressing INPUT to complete the setting.

（1）You can turn on or off the “Blow movement 1” by pressing ON or OFF to make the setting. This operation starts until the completion of mold open.

Blow time 1: time needed for blow 1
Blow delay 1: time delayed for blow after mold open

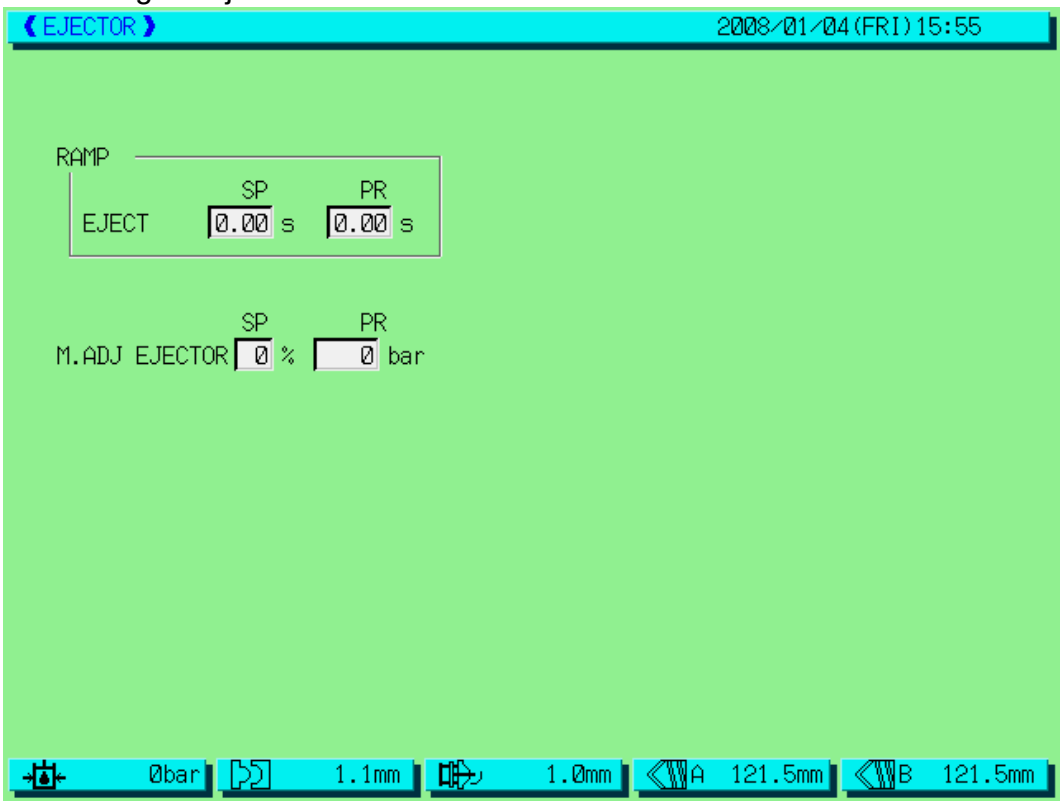
（2）You can turn on or off the “Blow movement 2” by pressing ON or OFF to make the setting. This operation starts during mold open.

Mold position when blow 2 starts: set the start position of blow 2 during mold open
Blow time 2: time needed for blow 2
Blow delay 2: time delayed for the start of blow 2 after mold positioning.

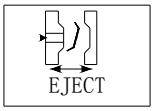
（3）You can turn on or off the “Blow movement 3” by pressing ON or OFF to make the setting. This operation starts during mold open.

Mold position when blow 3 starts: set the start position of blow 3 during mold open
Blow time 3: time needed for blow 3
Blow delay 3: time delayed for the start of blow 3 after mold positioning.

2、Setting for ejector accelerate/decelerate



Screen 06

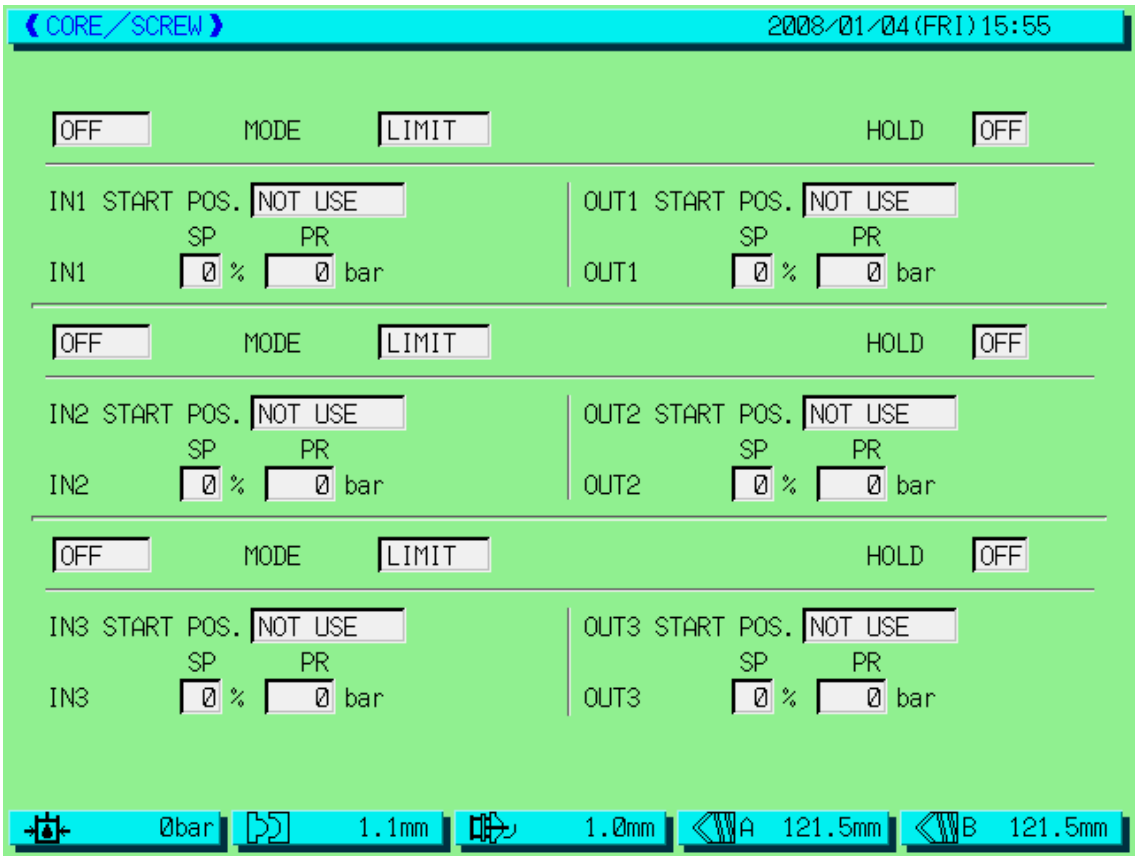
（1）Press  + 

in screen 05 to enter the password inputting screen. Screen 06 will be called up after the correct password is input, in which you can make settings on the ejector accelerate/decelerate parameters.

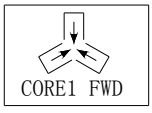
（2）You can set the add/minus parameter for the ejector and mold adjustment ejector. The mold adjustment ejector is a special function.

（3）Press the cursor button  to select the parameter that needs to be modified. Input the intended value followed by pressing INPUT to complete the setting.

3.2.6 Core and unscrew



Screen 07

（1）Press 

to call up the screen 07

（2）Within this screen, you can set the parameters for three groups of core.

Press  to activate the parameter, then input the intended value followed by pressing INPUT to complete the setting.

（3）For the 1st group you can set as Core 1, Unscrew 1, No move. Press ON or OFF to select.

（4）"Move Style": Press ON OFF to select within the following three modes: "Time", "Count" and "Limited Position", of which "Count" is only valid in case of Unscrew.

（5） "Sync Move": Press ON OFF to select within the following two modes: "On" and "Off"

（6）"Hold": Press ON OFF to select within the following two modes: "On" and "Off"

（7） Core 1 forward position: the position that Core 1 or Unscrew 1 starts to fill core

（8） Core 1 backward position: the position that Core 1 or Unscrew starts to retreat core

（9） Setting on forward 1 speed, pressure or time

Speed: 0%～99%

Pressure: 0～999bar

Time: 0～99.9 seconds

（10） Setting on backward 1 speed, pressure or time

Speed: 0%～99%

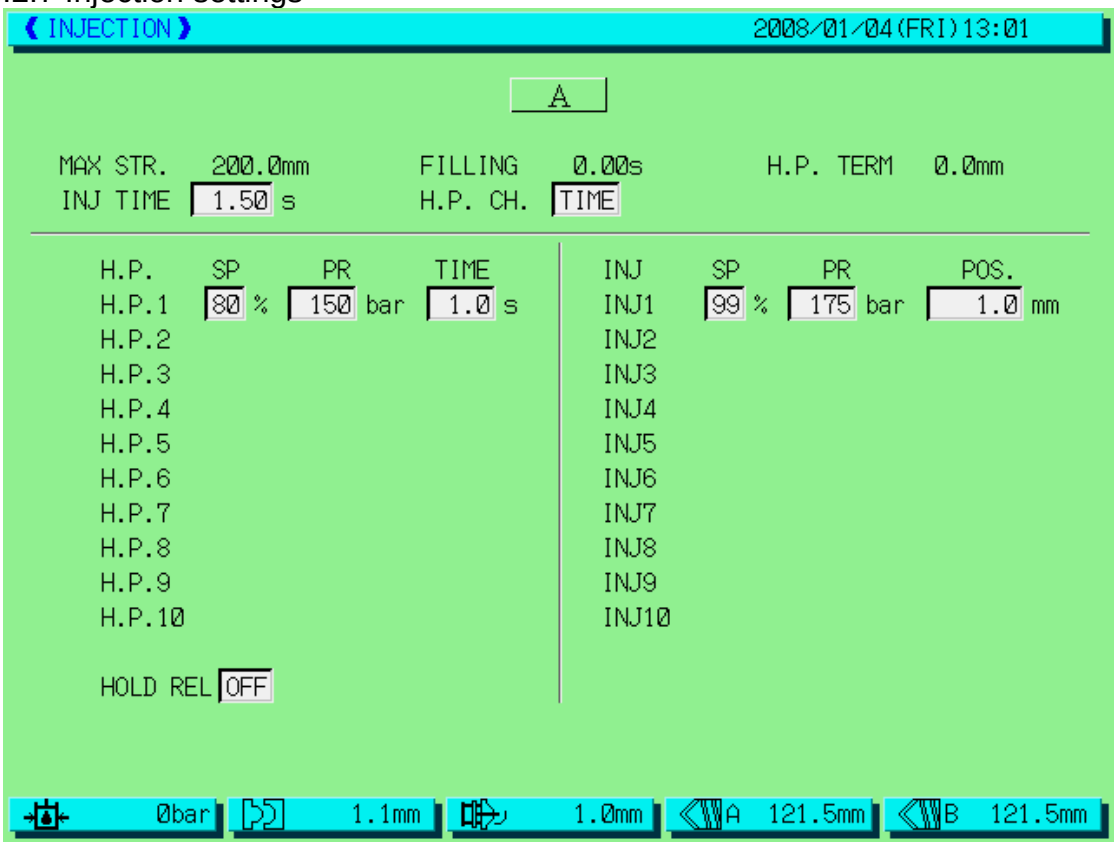
Pressure: 0～999bar

Time: 0～99.9 seconds

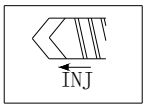
（11） The settings for the other two groups are the same of that of the first group

（12） The setting of the other two group are the same with .group one.

3.2.7 Injection settings



Screen 08

（1）Press 

to call up screen (08). Press the cursor button  to select the setting for injection. Input the intended value followed by pressing INPUT to complete the setting.

（2） Injection time: 0～999.9 seconds

（3） Three modes for holding-pressure switch: “Time” “Location” and “Pressure”

（4）0～999bar

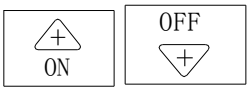
（5）Pressure holding stages: 10 stages in total

Speed: 0~99%. The speed for each stage can be set independently.
Pressure: 0~999bar.The pressure for each stage can be set independently.
Time: 0~99.9 seconds. The pressure holding time for each stage can be set independently.

（6）Injection stages

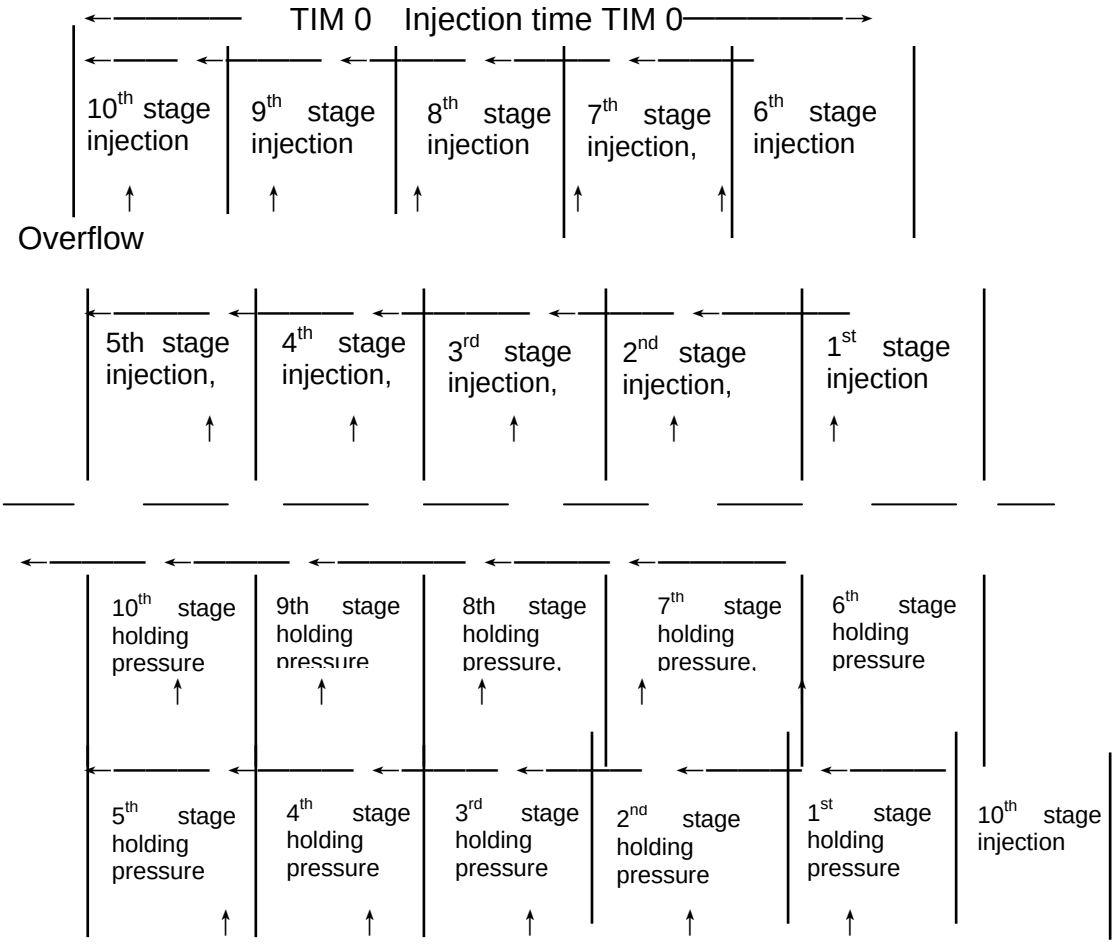
Speed: 0~99%. The speed for each stage can be set independently.
Pressure: 0~999bar.The pressure for each stage can be set independently.
Position: 0~1999.9mm. The position for each stage injection can be set

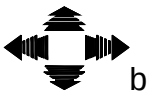
independently.

（7）“Release the holding pressure”: Press 

to select to enable or disable to release the holding pressure.

(8) Time for holding pressure and injection

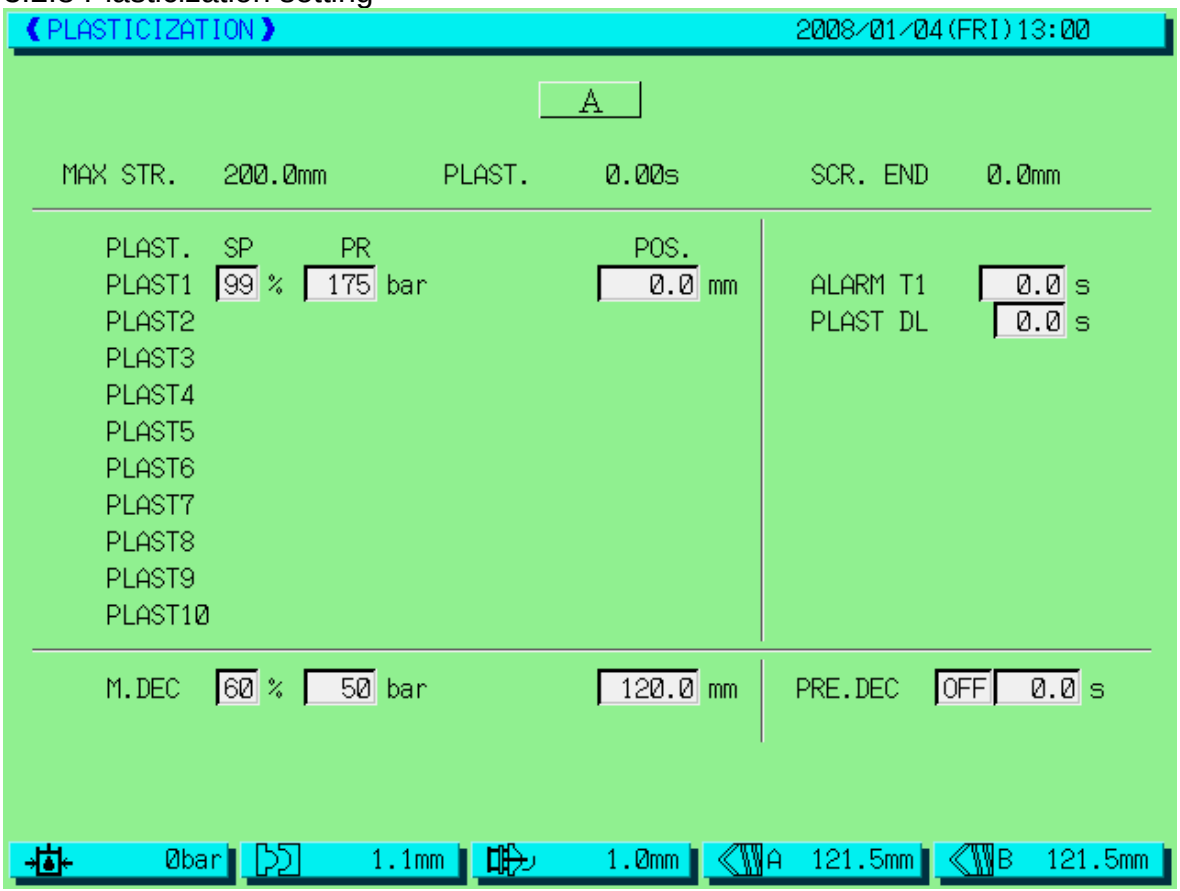


Injection B setting： First press  button and move cursor to group A until it turns black, then press 

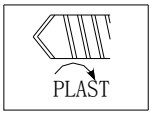
.After the appearance of “?” just press 

button can switch to the screen of setting. The setting method is the same with group A.

3.2.8 Plasticization setting



Screen 09

（1） There are 10 stages in total in plasticization, each of which has four parameters, including speed, pressure, back pressure and location. To set the parameter, press 

to call up screen (09). Then press the cursor button  to select the plasticization settings. Input the intended value followed by pressing 

to complete the setting.

（2）Notes on various parameters:

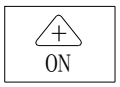
Speed 0～99％

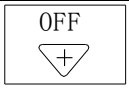
Pressure: 0～999bar (maximum value of the system)

Back pressure: 0～999bar (maximum value of the system)

Location: 0～1999.9mm (the position that the current stage of plast ends)

Backward injection: Speed （0～99％）, Pressure （0～999bar）, Stop position （0～999.9mm）

Backward injection before plast: You can press 

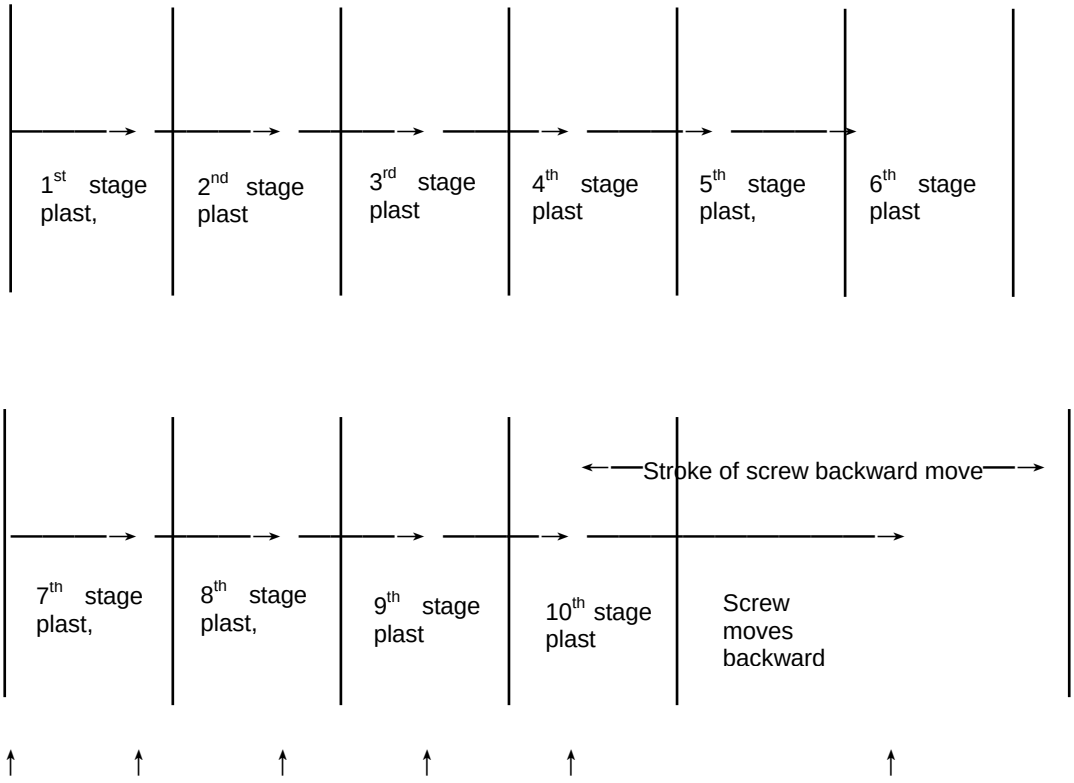
or 

to enable or disable the function. In the “On” status, the time setting can be 0～999.9 second.

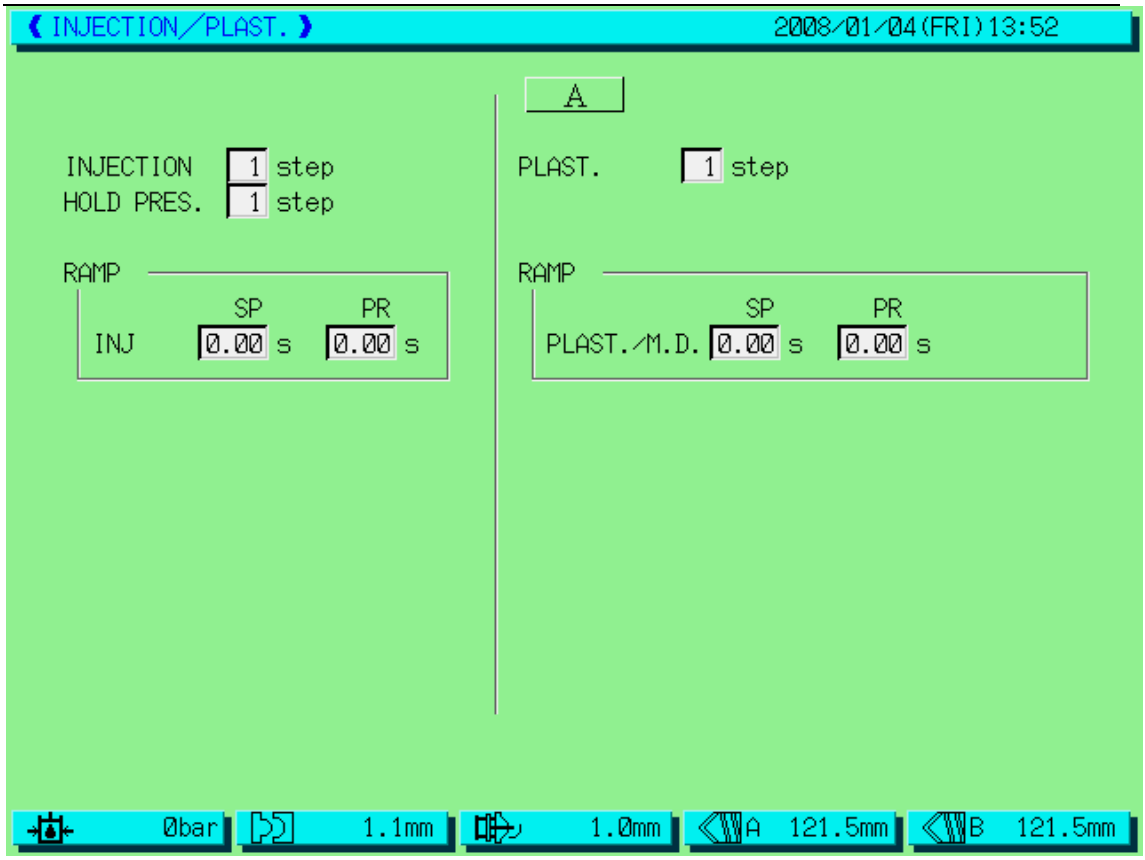
Plasticising time delay: 0～99.9 seconds

Alarm break: 0～999.9 seconds

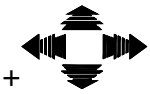
(3) Notes on different stage of time of plast



3.2.9 Setting on stages of injection/plast



Screen (10)

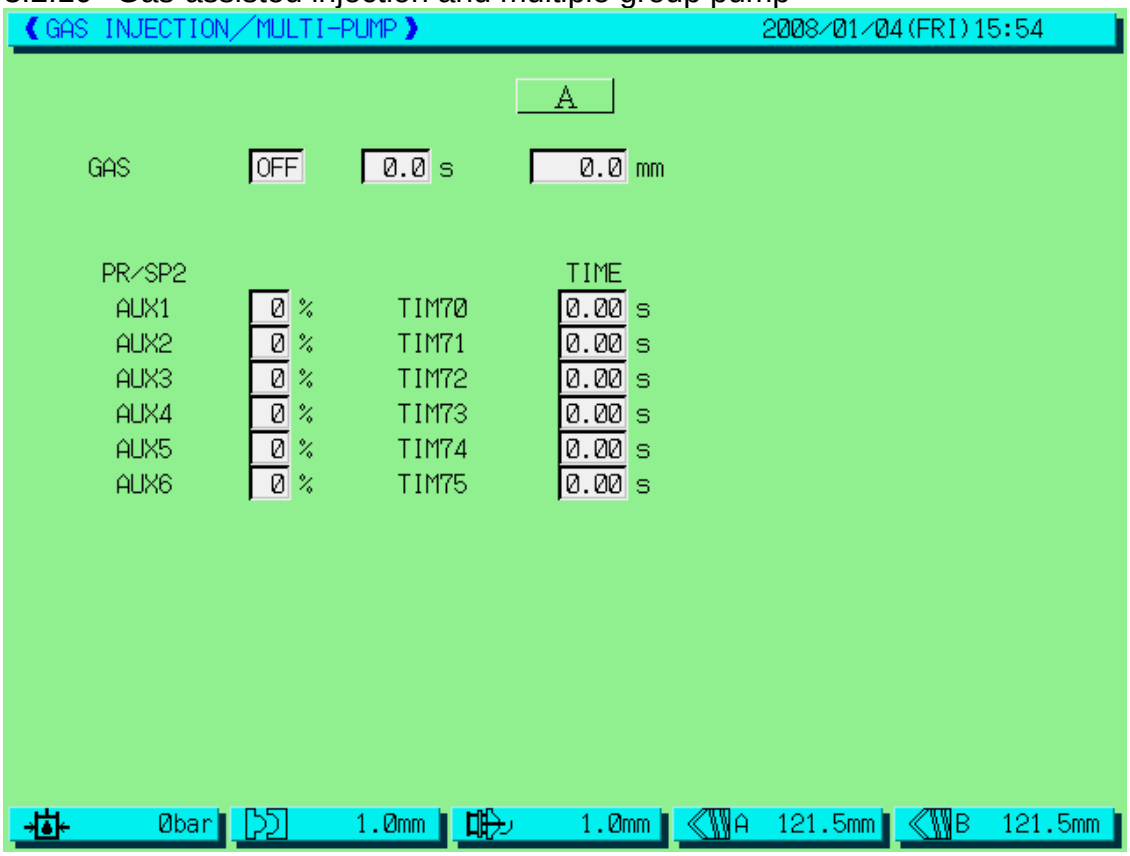
(1) In screen 09, press CANCEL +  to call up the screen 10, within which you can make settings on injection/plast stage and accelerate/decelerate

(2) The stage of injection, holding pressure and plast can be set in screen 10. You can set for 10 stages at most.

(3) The pressure parameter of accelerate/decelerate refers to the time that is consumed to reach the move.

(4) To make setting on the parameter, press  button to activate the parameter to be modified, then input the intended value followed by pressing INPUT to complete the setting.

3.2.10 Gas-assisted injection and multiple group pump



Screen(11)

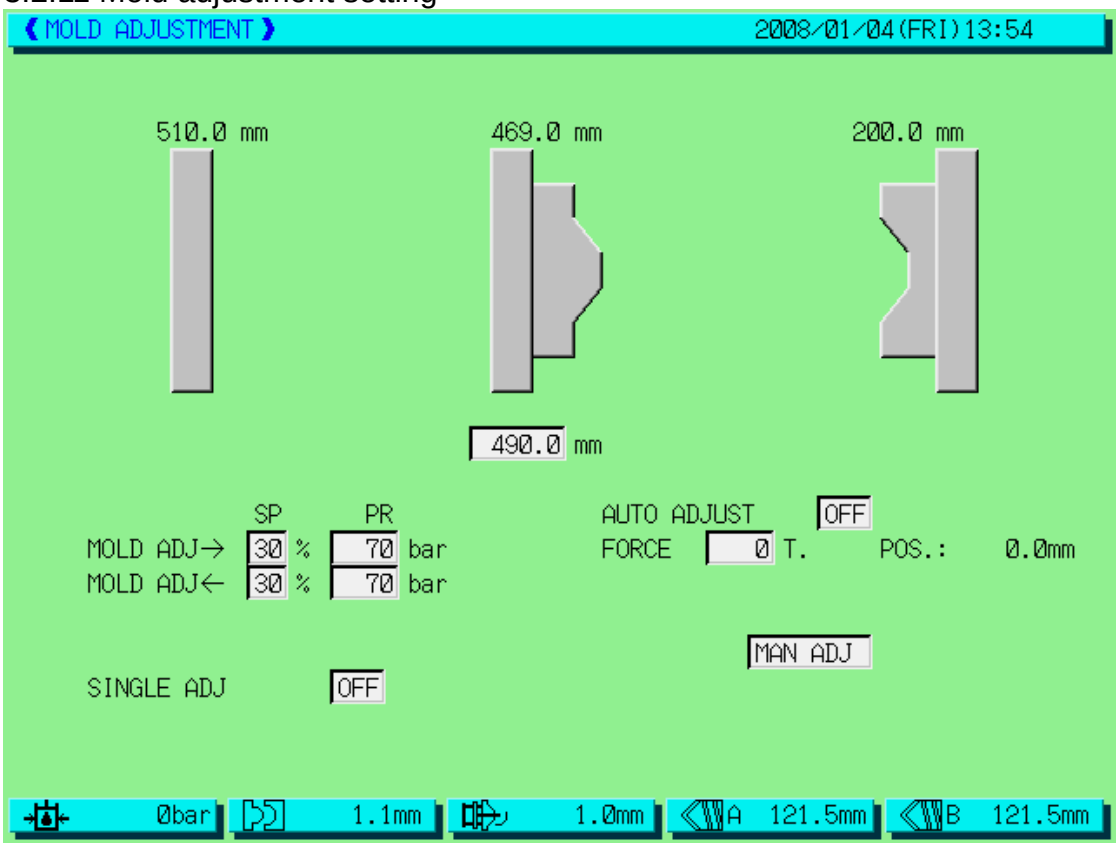
（1）The function of gas-assisted injection/multiple group pump is newly added in MCP40. Press CANCEL + ◆ in screen 10 to call up the password input screen, and then input the correct password and press CANCEL + ◆ twice to call up screen 11.

（2）By pressing ON or OFF, you can enable or disable the gas-assisted injection function. In the “On” status, you can set the gas-assisted time and gas-assisted stop location. To set the parameter, press ◆ to active the parameter, and then input the intended value followed by pressing INPUT to complete the setting.

（3）At the same time, we can set 6 group of pump for spare use. You can set the speed or pressure (0~99%) and working time (0~99.99 seconds) for each pump. You can press ◆ button to activate the parameter,

and then input the intended value followed by pressing INPUT to complete the setting. (Optional)

3.2.11 Mold adjustment setting



Screen (12)

（1）Press MOLD ADJ. to call up the screen 12

（2） Auto mold adjustment: Press the cursor button to active the setting. Press ON or OFF to enable or disable the auto mold adjustment function

（3） Teeth mold adjustment: Press the cursor button to active the setting. Press ON or OFF button to enable or disable the single teeth mold adjustment function. This function is optional.

（4） Mold thickness selection: 0～6553.5mm. Press the cursor button

 to active the setting, then input the intended mold thickness value followed by pressing INPUT to complete the setting.

（5） The setting for mold adjustment speed (0~99%) and pressure (0~999bar) can be activated by pressing the cursor button  , then input the intended value followed by pressing INPUT to complete the setting.

3.2.12 Injection chassis and auto clearing setting

1、Parameter setting

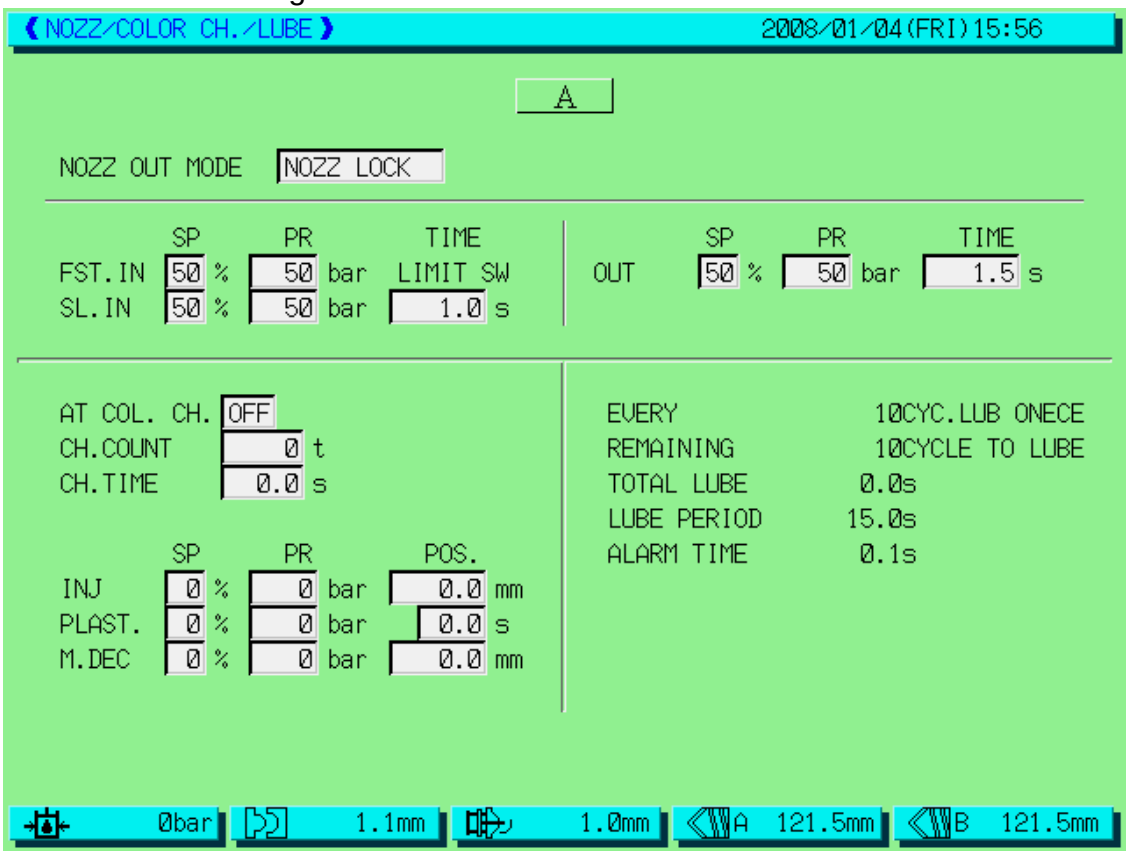
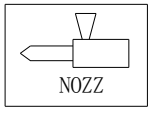
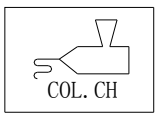
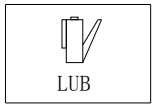


图 13

(1) Press 

or 

or 

to call up the screen (13)

(2) Press  button to select the parameter, input the intended value followed by pressing INPUT button to complete the setting.

Of which there are:

Injection chassis movement: there are three styles including before plast, after plast and fixed, the setting of which can be achieved by pressing + ON or OFF + button.

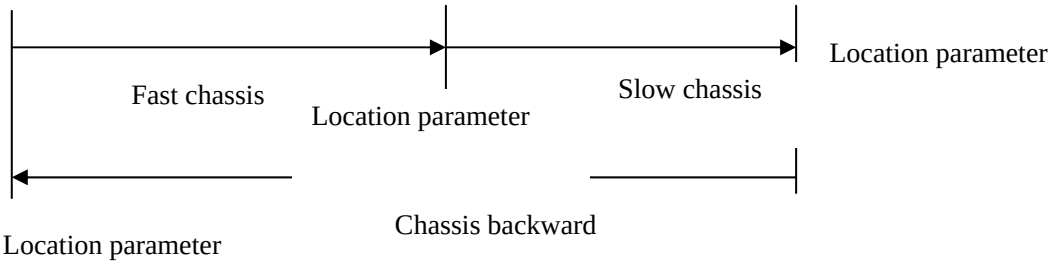
The “Auto Clearing” function can be enabled or disabled, which can be achieved by pressing + ON or OFF + button.

Various movements including fast chassis, slow chassis, chassis backward, injection, plast, injection backward can be determined by three parameters including speed, pressure, and location. The value shown in the screen is the maximum value.

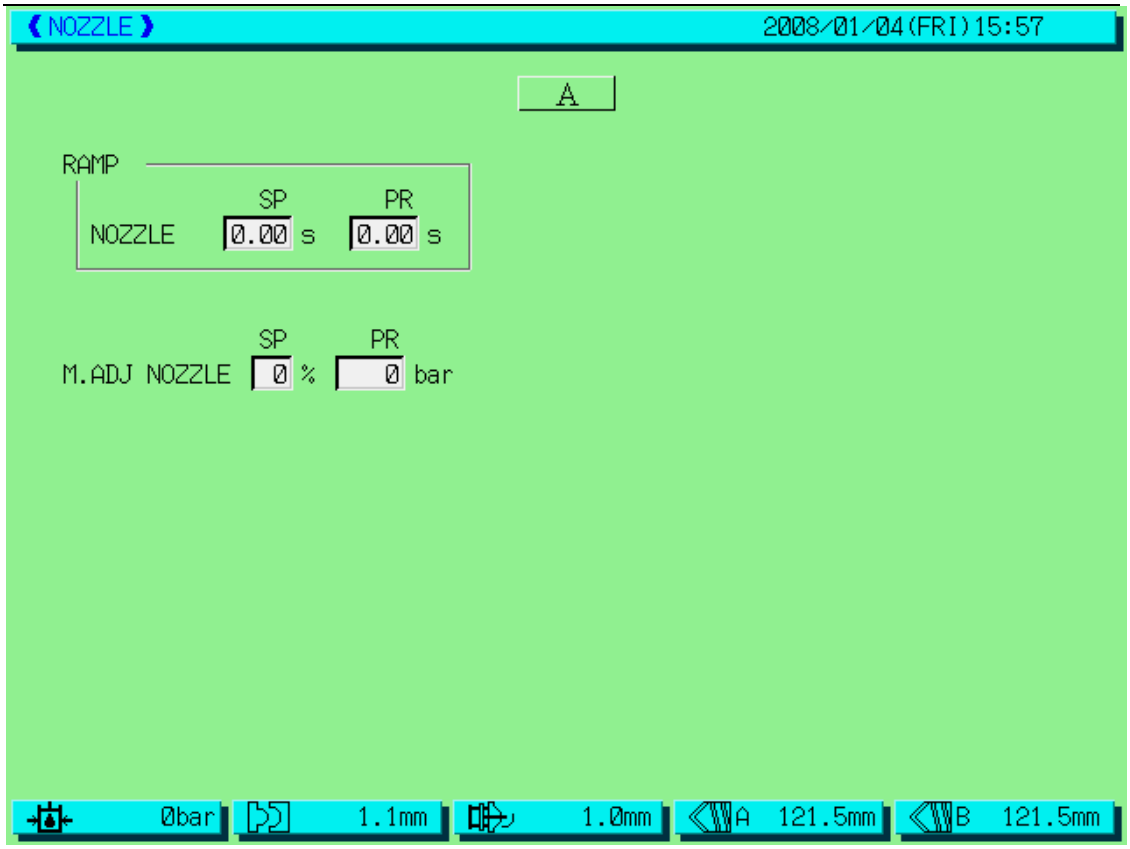
The “Auto Clearing” function is determined by two parameters “Times” and “Time”.

（3）Other data shown in the screen are tested data by the computer.

（4）



2、Setting on accelerate/decelerate



Screen (14)

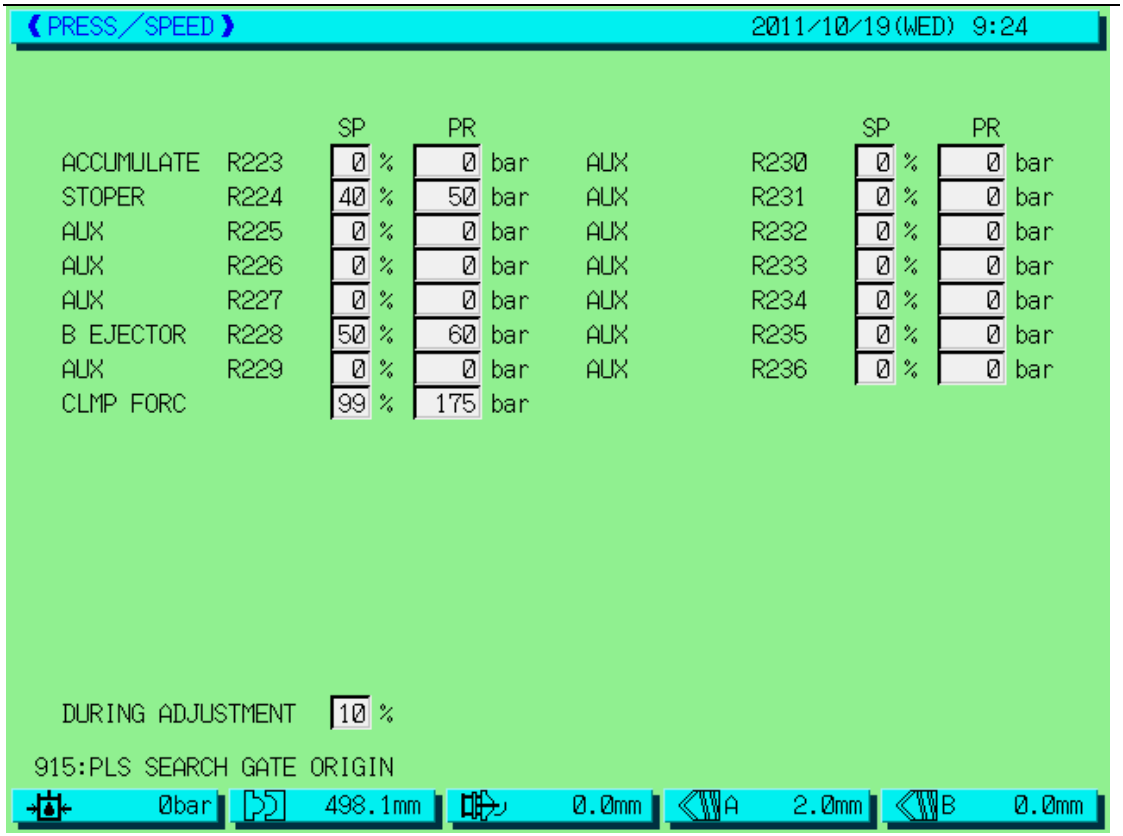
（1） In the chassis screen, press CANCEL + to call up the screen (14)

（2） Press button to select the parameter to be modified, then input the intended value followed by pressing INPUT button to complete the setting.

Of which there are:
The speed and pressure parameter behind the chassis refers to the time that is needed by accelerate/decelerate until the chassis reaches the ultimate speed.

The speed and pressure parameter behind the mold adjustment chassis refers to the speed and pressure that the chassis reaches in the end.

3、Setting on backup speed and pressure



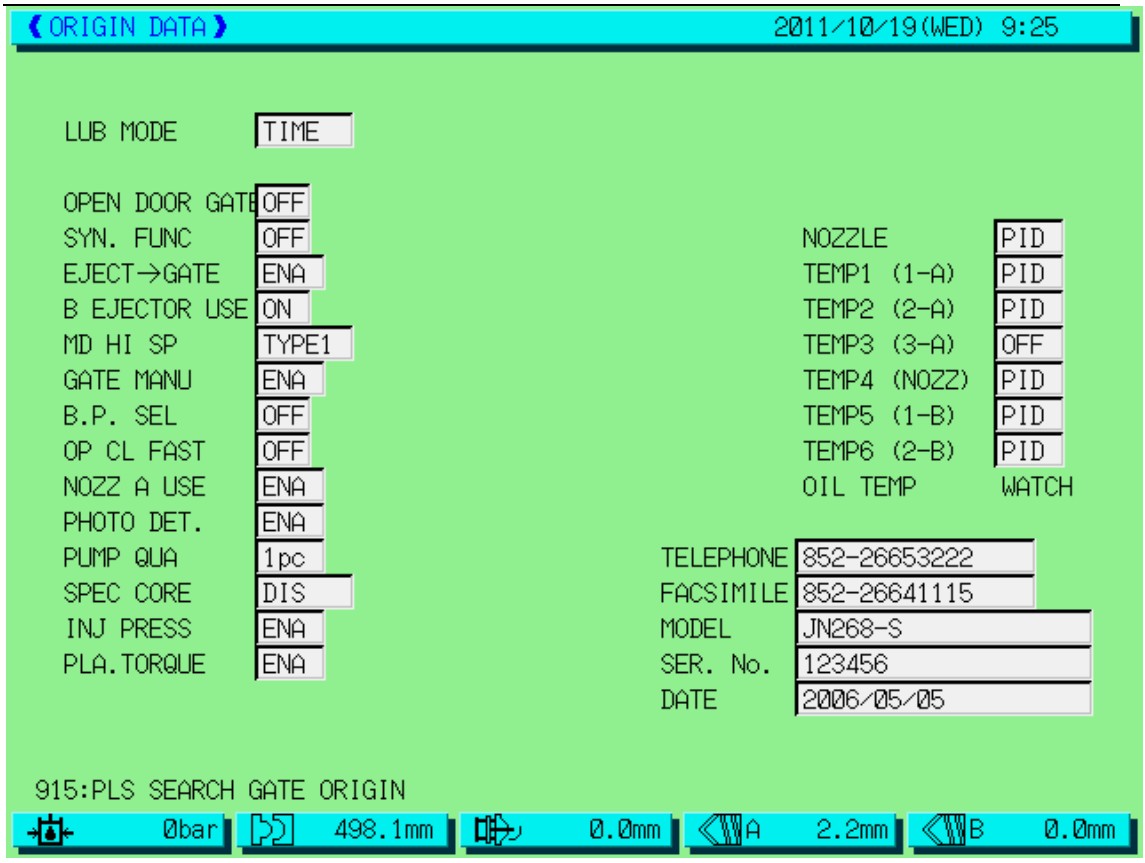
Screen (15)

（1） Press  +chassis to call up the screen (15)

（2） Press  button to select the parameter to be modified, input the intended value followed by pressing INPUT button to complete the setting.

3.2.13 Setting on initial data

1、Use of special function



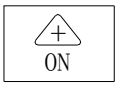
Screen(16)

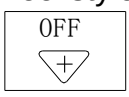
（1） Press 

+ mould open to enter the password screen, input the correct password, then press 

+  to enter the screen (16)

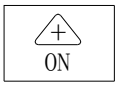
（2） Press  to select the function
Of which there are:

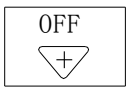
Lubrication style: three styles including “Spare”, “Time” and “Switch”. Press 

or 

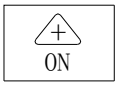
to make settings.

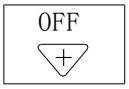
Chassis movement style: you can choose “Location: or “Time” control. The standard machine uses the “Time” control.

Rear safety door: there are two statuses, “On” and “Off”, which can be selected by pressing 

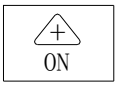
or 

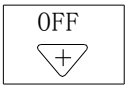
button. “On” means to inspect the rear safety door, and “Off” means not to inspect the rear safety door (Optional)

Interlink function: there are two statuses: “On” and “off”, which can be selected by pressing 

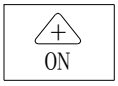
or 

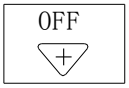
button (Optional)

Fast injection: there are two statuses: “Use” and “Not in use”, which can be selected by pressing 

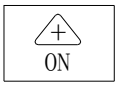
or 

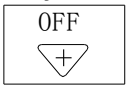
button (Optional)

Ejection B use: there are two statuses: “In use” and “Not in use”, which can be selected by pressing 

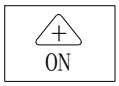
or 

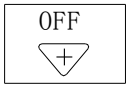
button.

Fast style: there are two statuses: “Style 1” and “Style 2”, which can be selected by pressing 

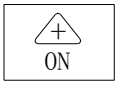
or 

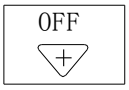
button.

Turnplate manual operation: there are two statuses: “In use” and “Not in use”, which can be selected by pressing 

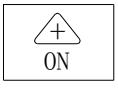
or 

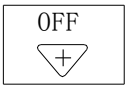
button (Optional)

Rear pressure selection: there are two statuses: “On” and “off”, which can be selected by pressing 

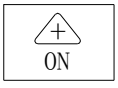
or 

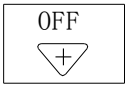
button.

Fast opening clamping: there are two statuses: “On” and “Off”, which can be selected by pressing 

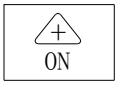
or 

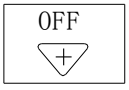
button.(Optional)

Injection platform A use: there are two status: “Use” and “Not in use”, which can be selected by pressing 

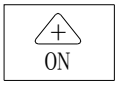
or 

button.

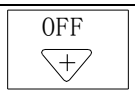
Photo sensor test: there are two statuses: “Use” and “Not in use”, which can be selected by pressing 

or 

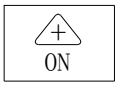
button.

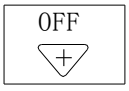
Number of pump: The number can be selected by pressing 

or

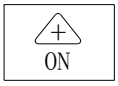


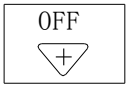
button (Optional).

Special core: there are five statuses: “Style 1”, “Style 2”. “Style 3”, “Style 4”, “Style 5” and “Not in use”, which can be selected by pressing 

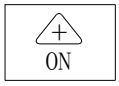
or 

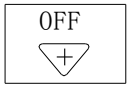
button.

Injection pressure: there are two status: “Use” and “Not in use”, which can be selected by pressing 

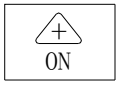
or 

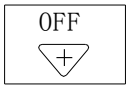
button (Optional). This is an optional function.

Plast torque: there are two statuses: “Use” and “Not in use”, which can be selected by pressing 

or 

button (Optional). This is an optional function.

There are three settings: “Manual”, “PID”, and “Not in use” for “Nozzle”, “Temperature 1”, “Temperature 2”, “Temperature 3”, “Temperature 4”, “Temperature 5”, “Temperature 6”, which can be selected by pressing 

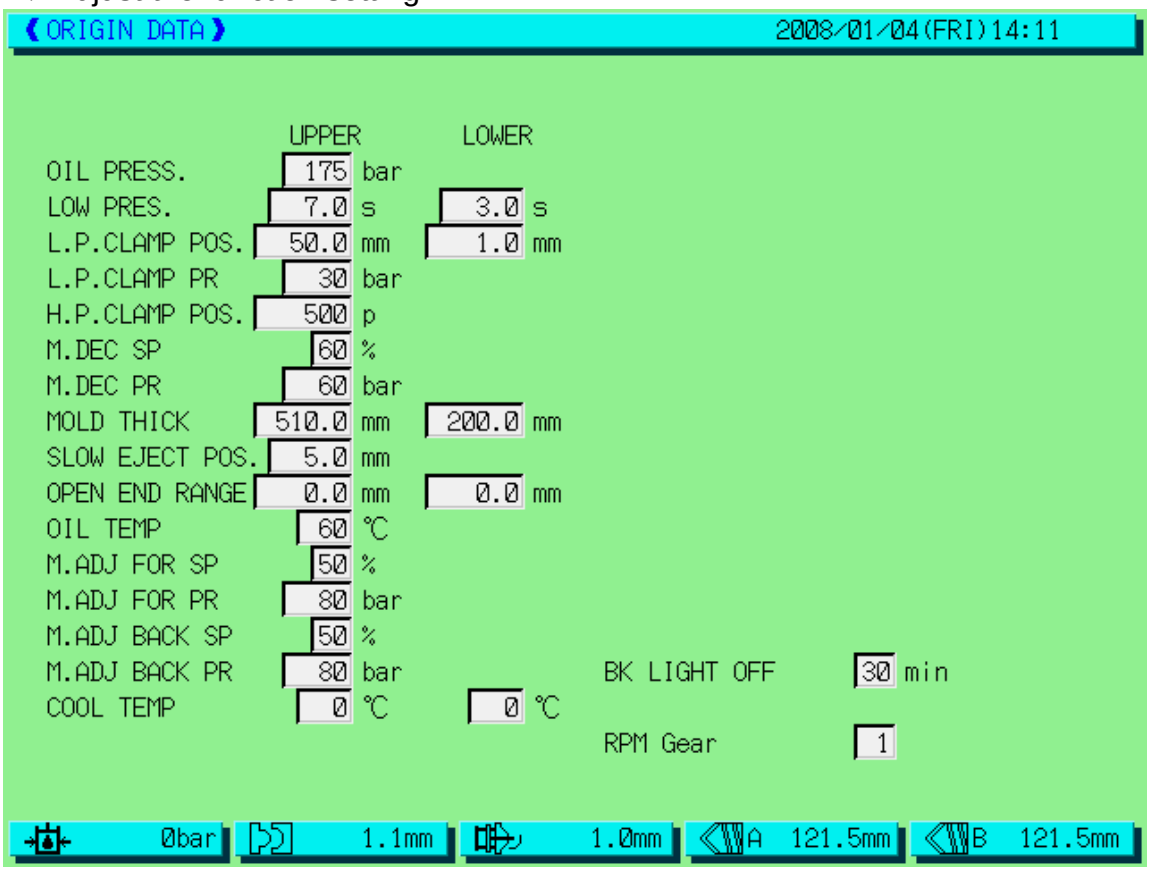
or 

button.

（3）“Tel”, “Fax”, “Machine Model”, “Model number”, “Manufacture Date”: Press the intended value followed by pressing 

to completing the setting.

2、Adjust the function setting.



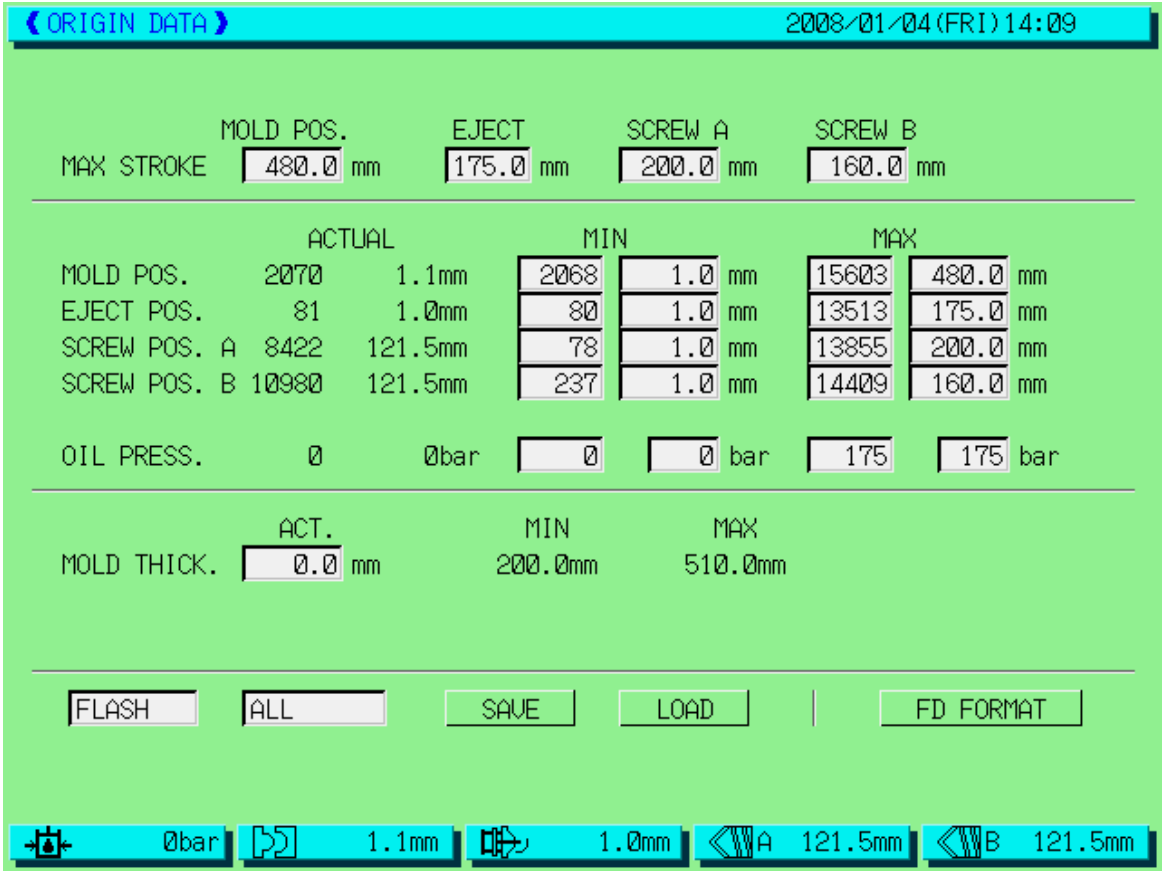
Screen(17)

（1） In screen (16), keep pressing CANCEL + button to enter screen (17)

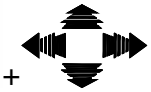
（2） Press button to select the function, input the intended value followed by press INPUT button to complete the setting.

（3） The value shown in the screen above is the maximum value of the parameters. The maximum and minimum values that are set here are used to define the parameter setting of various functions under their owing setting screen.

3、Setting on location of mold clamp



Screen (18)

（1） In screen (17), press  +  button to call up screen (18), which is the adjust screen of electronic ruler.

（2） Press  button to select the parameter, input the intended value followed by pressing INPUT button to complete the setting.

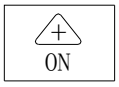
Of which there are:

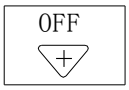
There are three parameters are available for adjustment: “Current”, “Minimum” and “Maximum” for the four function positions, which are “Clamp position”, “Injection A position”, “Injection B position”, and “Ejection position”. Each parameter has two values. The left value is the sensor data of the position sensor, and the right value is the actual stroke to be needed.

There are three parameters are available for adjustment: “Current”, “Minimum” and “Maximum” for the “Oil pressure” function. Each parameter has two values. The left value is the data of the pressure sensor, and the right value is the

actual pressure to be needed.

There are three parameters are available for adjustment: “Current”, “Minimum” and “Maximum” for the “Mold Adjust thickness” function. The “Minimum” parameter refers to the thickness of the thinnest mold that can be installed on the machine. The “Maximum” parameter refers to the thickness of the max mold that can be installed on the machine. The “Current” parameter refers to the actual thickness of the mold that is installed on the machine.

（3） At the bottom of the screen shows the save function. There are two parameters available for adjustment. The first parameter is the store device with two selections “FLASH” and “FD”. The second parameter is the type of parameter that is saved with three selections “ALL”, “LIMIT” and “MOLD COM”. The selection of the parameter can be achieved by pressing the 

or 

button. In addition there are three function button “SAVE”, “LOAD” and “FD FORMAT”, which can save the data to the storage device, or read the data from the storage device, or format the floppy the disk.

FLASH means to save the current parameters to the storage device of MPC40.
FD means to save the current parameters to the 3.5” floppy disk.
ALL means to select all parameters.
LIMIT means to select the position parameter only.
MOLD COM means to only save the forming condition.

（4） Data adjustment method for the position sensor

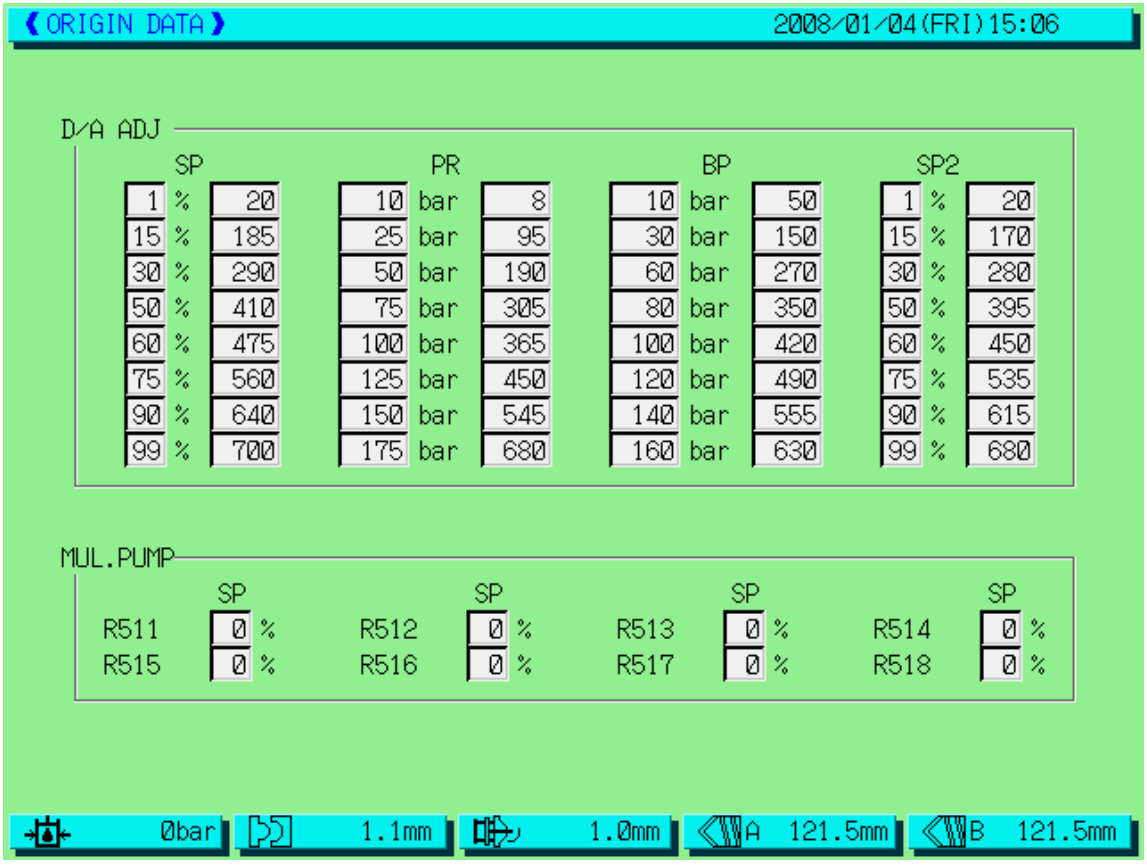
In all the parameters above, the mold clamp position, injection A position, injection B position and ejection position are corresponding to the position sensor. Take the mold clamp position as an example. The adjustment is as below,

A. Set the maximum stroke of the mould clamp position, i.e. as 3000
B. Set the minimum value of the mould clamp position as “0”. Then take the mold clamp position to the end, and read the sensor data of the position sensor at the left of the current parameter. Put the data into the input area at the left of the minimum parameter. (In the actual test, to prevent the interference of the electronic noise, the input value should be more than the actual value by 2. For example, if the sensor date of the position sensor is 500, then the input should be 502)
C. Set the maximum value: Set the data of the position sensor as the maximum at the left to the parameter. (For example as 16383). Set the right parameter as the maximum stroke (For example as 3000), and then open the mold to the end. Read the sensor data of the

position sensor at the left to the current parameter, and input the value to the input area at the left to the maximum parameter. (In the actual test, to prevent the interference of the electronic noise, the input value should be less than the actual value by 2. For example, if the sensor date of the position sensor is 16383, then the input should be 16381)

D. Apply the same procedure to the other parameters. By take the move to the maximum or minimum end you can get the corresponding value.

4、Output revision setting



Screen (19)

（1） In screen (18), press CANCEL + ◆ to enter the screen (19)

(2) Press ◆ to select the function. Then input the intended value followed by pressing INPUT button to complete the setting.

(3) The value shown on the screen is the maximum value of the parameter. The maximum and minimum values are used to limit the range of setting of various functions.

(4) This screen shows the function when the machine makes a linear adjustment

There are four parameters including “speed”, “pressure”, “backup pressure” and “speed 2”. The “speed” parameter is used to adjust the linear function of system flow valve. The “pressure” parameter is used to adjust the linear function of the system pressure valve. The “backup pressure” and “speed 2” are special parameters, which are optional and should be selected as per the function of the machine.

The instruction on the adjustment of the parameters is shown as below,

“Pressure”: This parameter corresponds two parameters. The left parameter is the actual output pressure of the machine. The right parameter is the volume that the computer outputs to the system pressure valve.
To adjust the parameter, set the output pressure value at the bottom as the maximum pressure of the machine, i.e. 175 bar. Then set the speed and pressure of the chassis moving forward. Check if the value in the pressure gauge is the giving value, i.e. 175bar. If not, then change the value corresponding the “output pressure value” until the pressure shown in the pressure gauge matches the given pressure, i.e. 175bar. For the other parameters, just set at a step-by-step reduction by 10% or 20%.

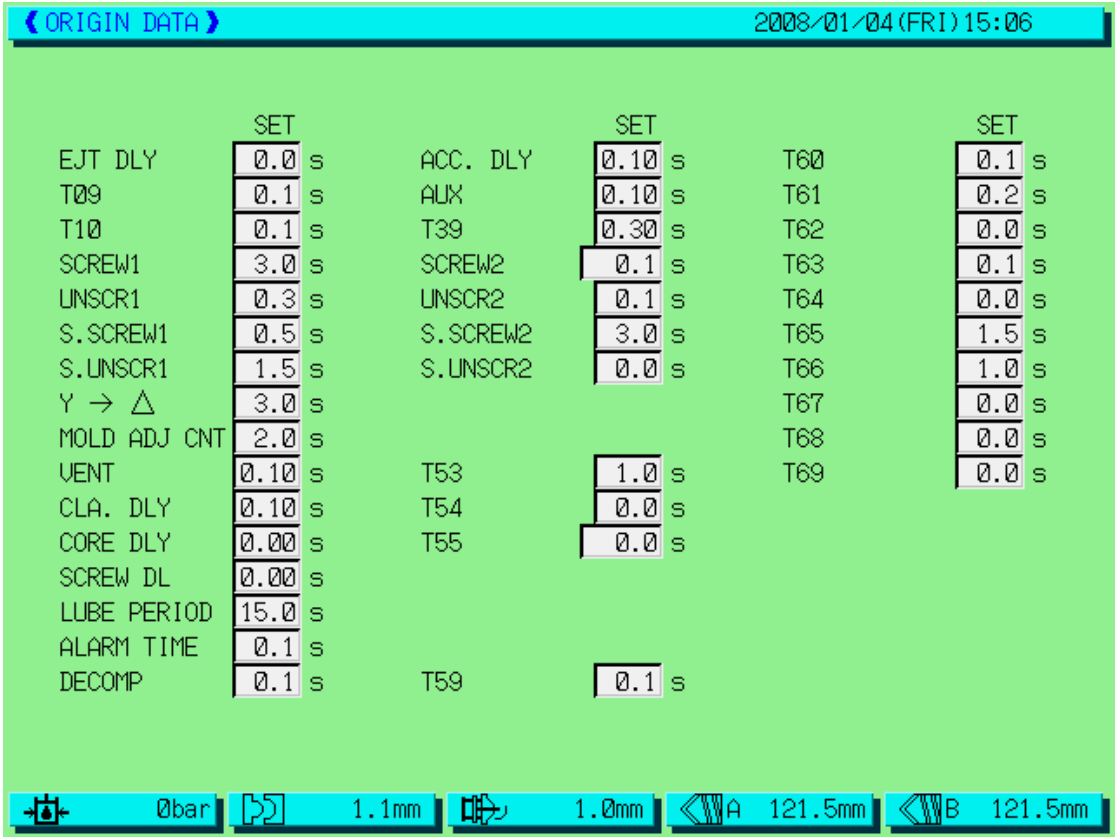
“Speed” parameter: the setting is similar to that of the “pressure” parameter. Set the maximum value first, then reduce step-by-step pro rata. The left parameter is the percentage of the actual output of the machine. The right parameter is the volume that the computer outputs to the system pressure valve.

To adjust the parameter, just set the percentage of the final output as the maximum value (99%). Then set the maximum speed (99%) of a specific stage of plast (i.e. the last stage) in the plast screen. Give a certain pressure (i.e. 50 bar), then start the plast (pasticising) operation. Check if the rotation speed of the gauge matches. Of not, then adjust the right parameter to make it consistent. Set other parameters by a step-by-step reduction at 10% or 20% pro rata.

“Backup pressure” and “speed 2” can be adjusted accordingly, too.

（5）The “multiple oil pump” is an optional function.

5、Setting on various time relay.



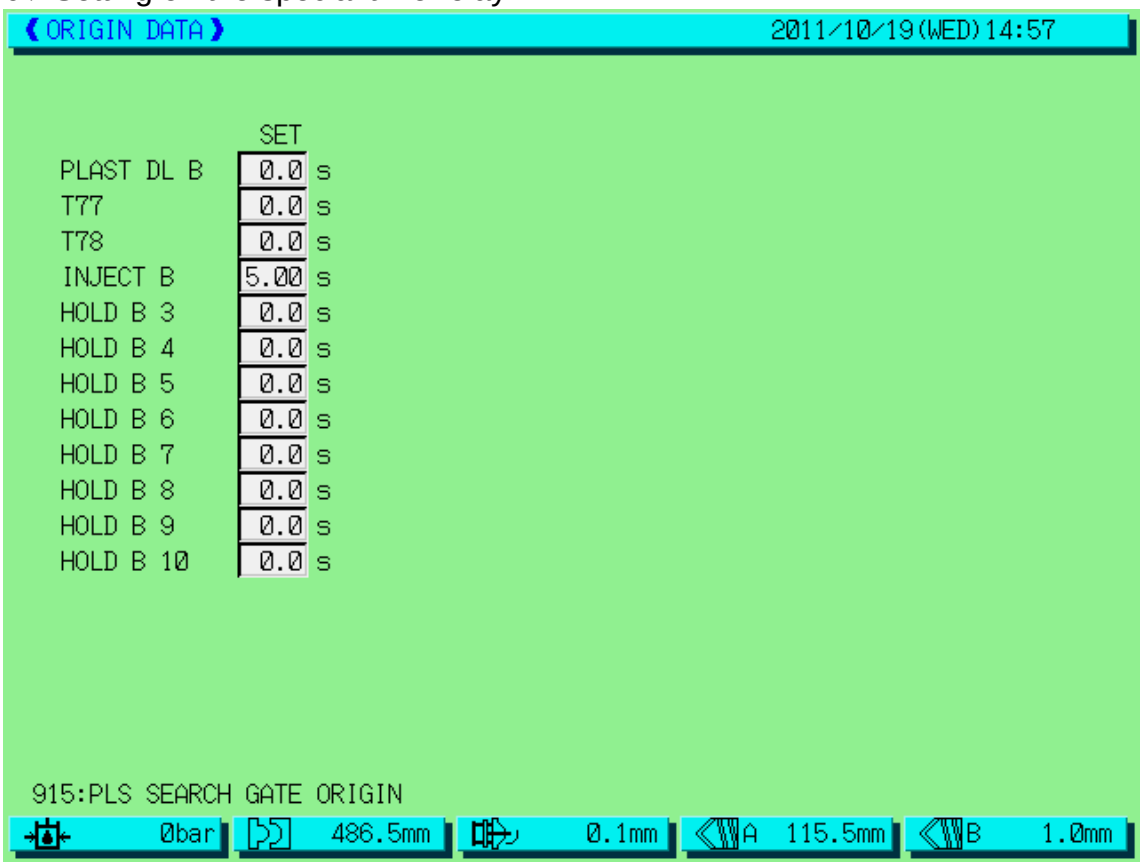
Screen (20)

（1） In screen (19), press CANCEL + ✥ to enter screen (20), which is to set the time of various relay during the control

（2） Press ✥ to select the function, input the intended value followed by pressing INPUT button to complete the setting.

（3） The values shown in the screen are the maximum value of various parameters. The maximum value and the minimum value that are set here are used to limit the setting range of the parameters of various functions.

6、Setting on the special time relay



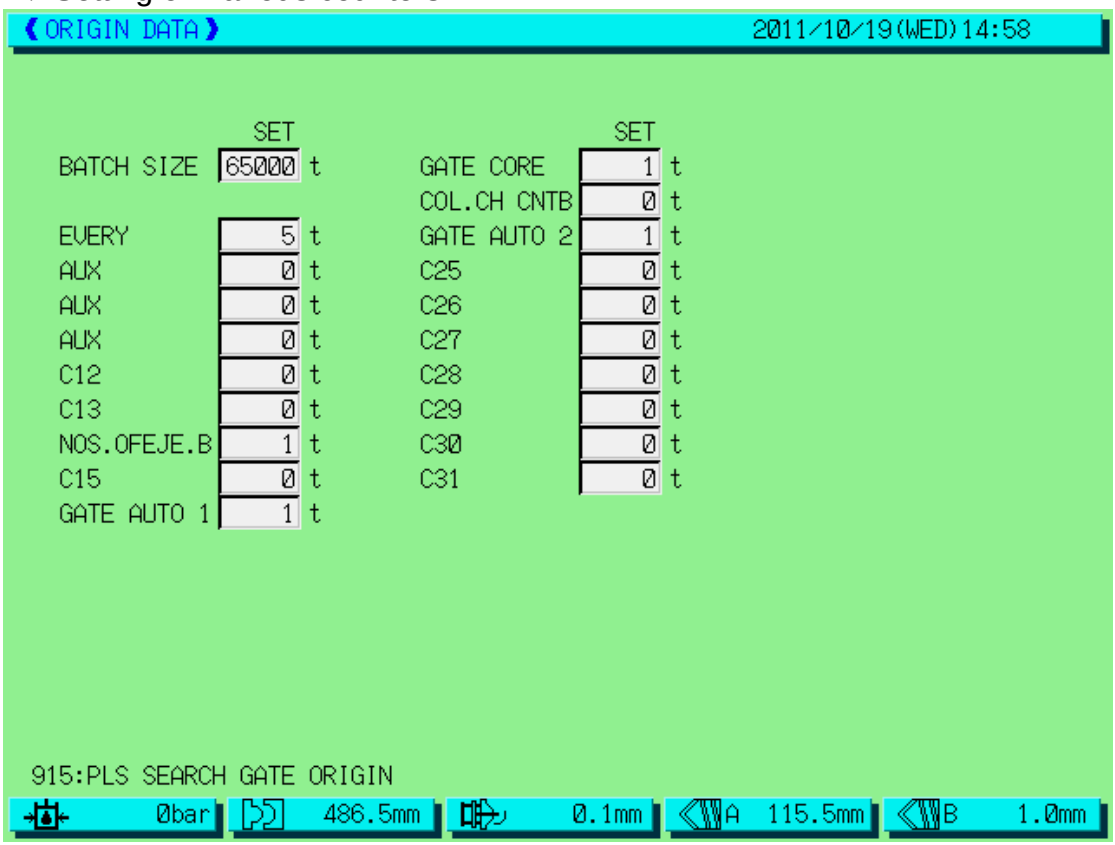
Screen (21)

（1）In screen (20), press CANCEL + button to enter the screen (21), in which you can set the time for the special time relay in the control of the machine.

（2）Press button to select the function. Input the intended value followed by pressing INPUT button to complete the setting.

（3） The values shown in the screen are the maximum value of various parameters. The maximum value and the minimum value that are set here are used to limit the setting range of the parameters of various functions.

7、Setting on various counters



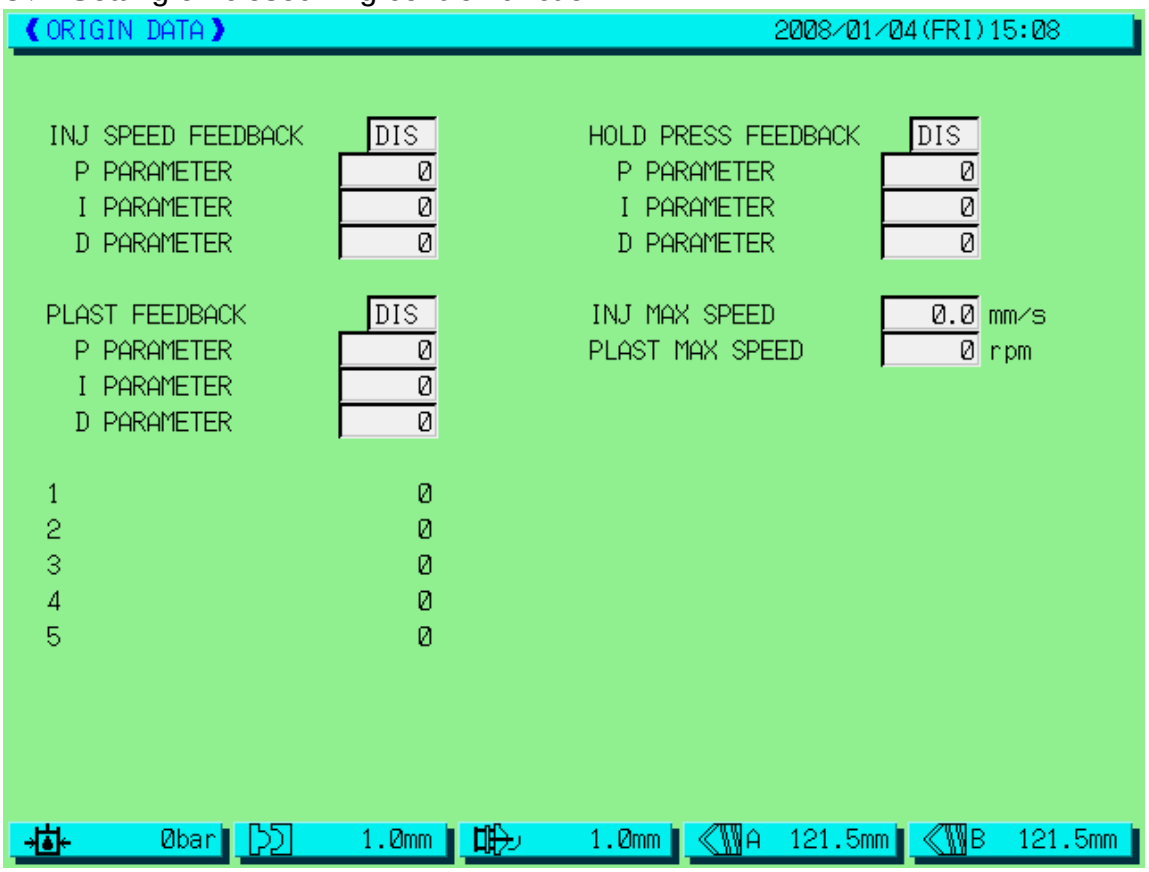
Screen (22)

（1）In screen (21), press CANCEL + button to enter the screen (22), in which you can set various counters in the control of the machine.

（2）Press button to select the function. Input the intended value followed by pressing INPUT button to complete the setting.

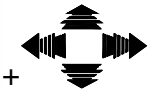
（3）The values shown in the screen are the maximum value of various parameters. The maximum value and the minimum value that are set here are sued to limit the setting range of the parameters of various functions.

8、 Setting on closed ring control function



Screen (23)

（1）In screen (22), press 

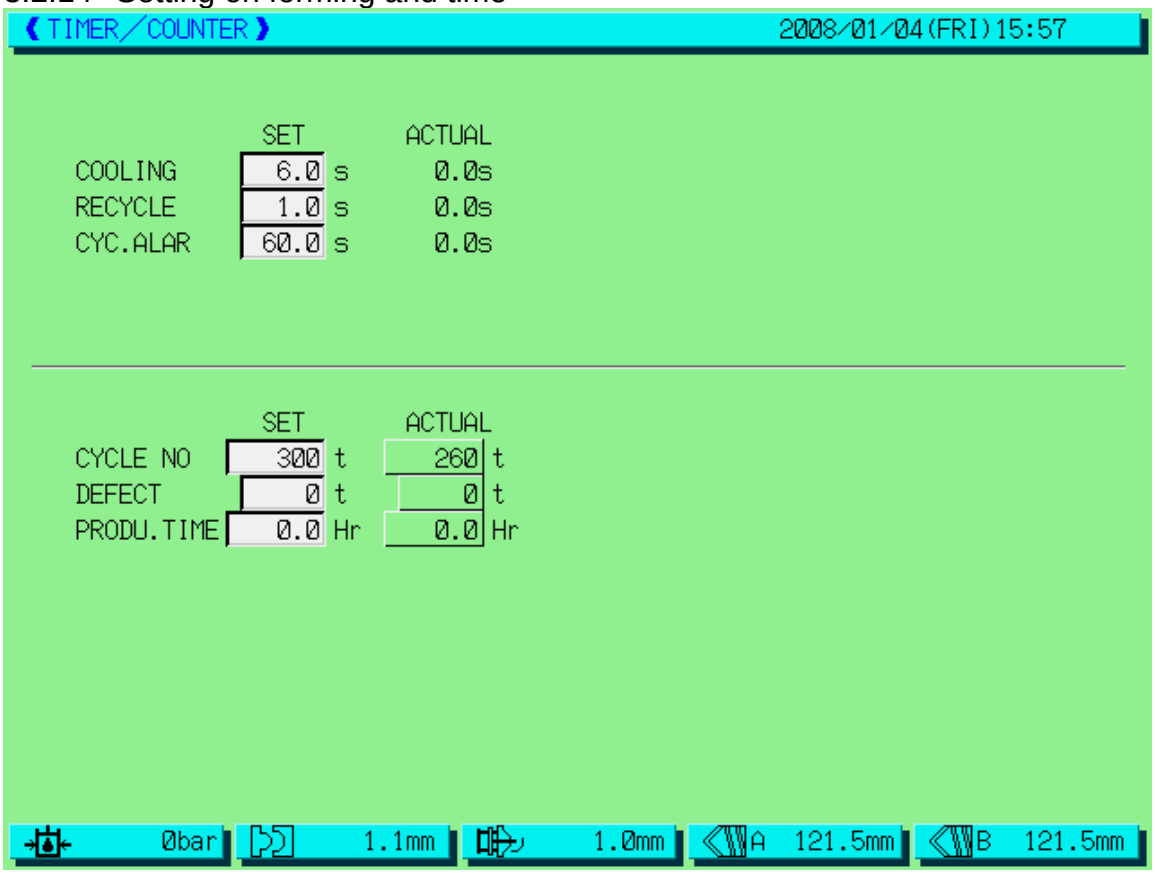
+  button to enter the screen (23), in which you can set the P.I.D parameters in the closed ring function of the machine.

（2） Press  button to select the function. Input the intended value followed by pressing 

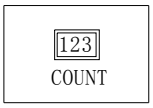
button to complete the setting.

（3） The values shown in the screen are the maximum value of various parameters. The maximum value and the minimum value that are set here are sued to limit the setting range of the parameters of various functions.

3.2.14 Setting on forming and time



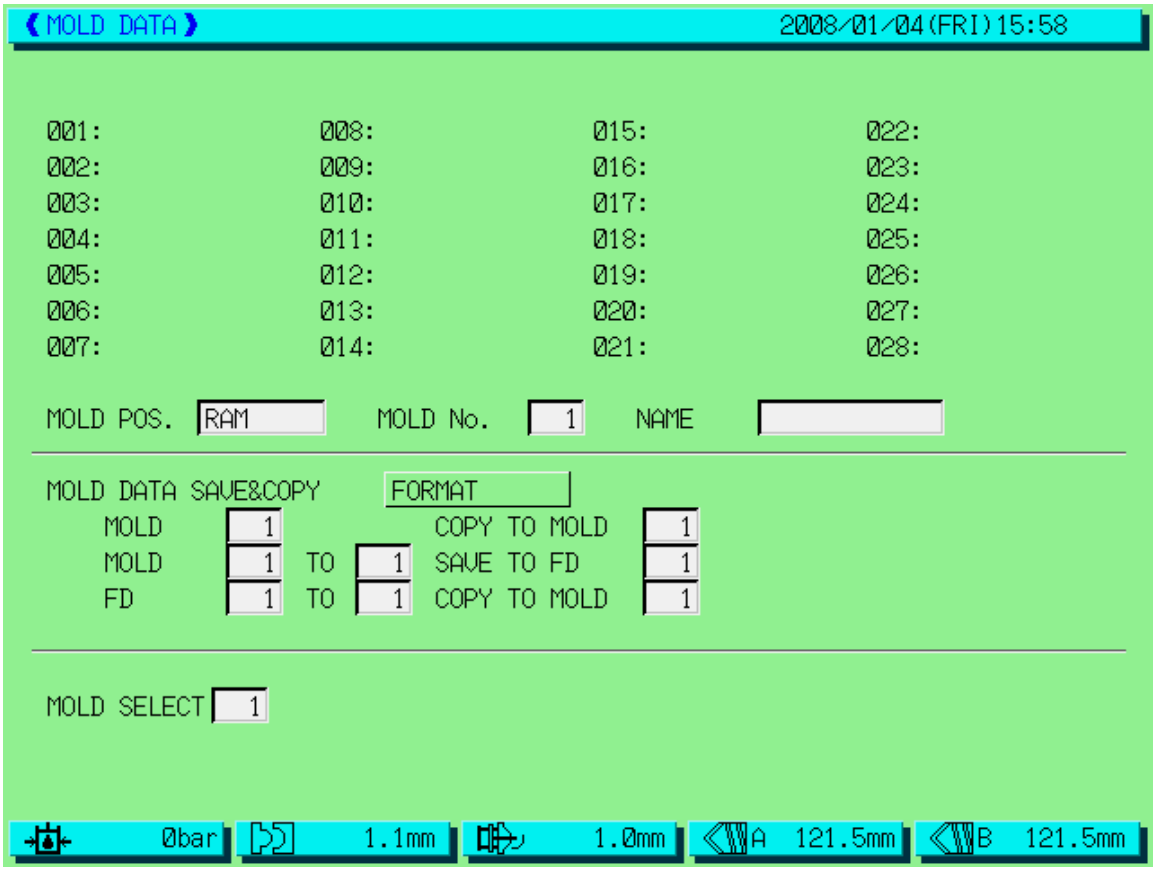
Screen (24)

（1） Press  to call up the screen (24)

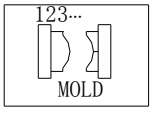
（2）Press  button to select the function. Input the intended value followed by pressing  button to complete the setting.

The “set” parameters of various functions can be set, while the “current” parameter is the actual parameter that has been tested by the computer.
The values shown in the screen are the maximum value of various parameters.

3.2.15 Selection on mold number and mold number overwrite



Screen (25)

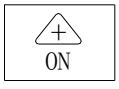
（1）Press 

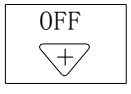
to call up screen (25)

（2）Press  button to select the function. Input the intended value followed by pressing 

button to complete the setting.

Of which, there are:

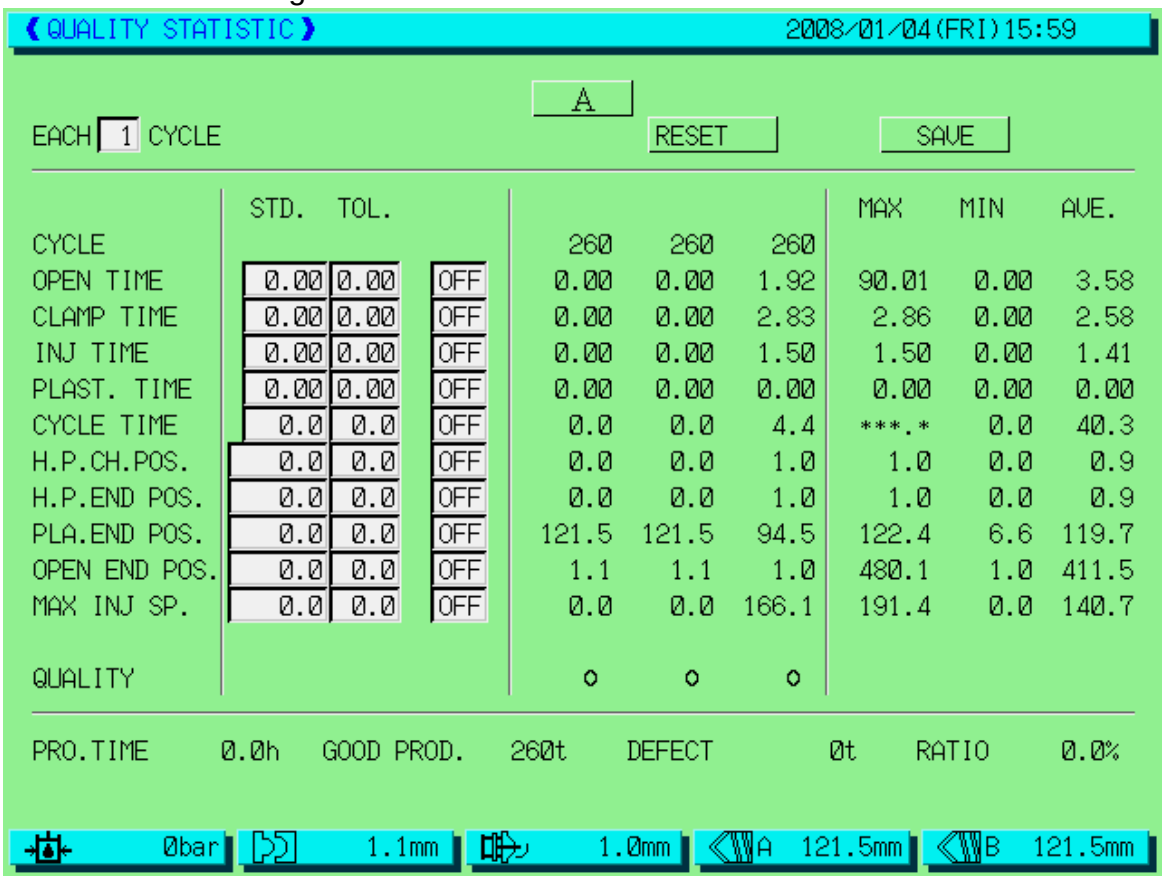
Find location: there are two locations, which are “computer memory” and “floppy disk”. You can press 

or 

to select.
During the access operation on the mold number data, you can save the data corresponding to the mold number to the floppy disk. In addition, you can also save the data corresponding to the mold number in the floppy disk to the computer.

3.2.16 Setting on quality statistics

1、Parameter setting



Screen (26)

（1）Press 

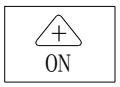
to call up the screen (26)

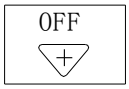
（2）Press  button to select the function.

There are two parameters “Standard” and “Offset” available for selection.

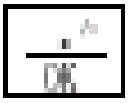
Input the intended value followed by pressing 

to complete the setting.

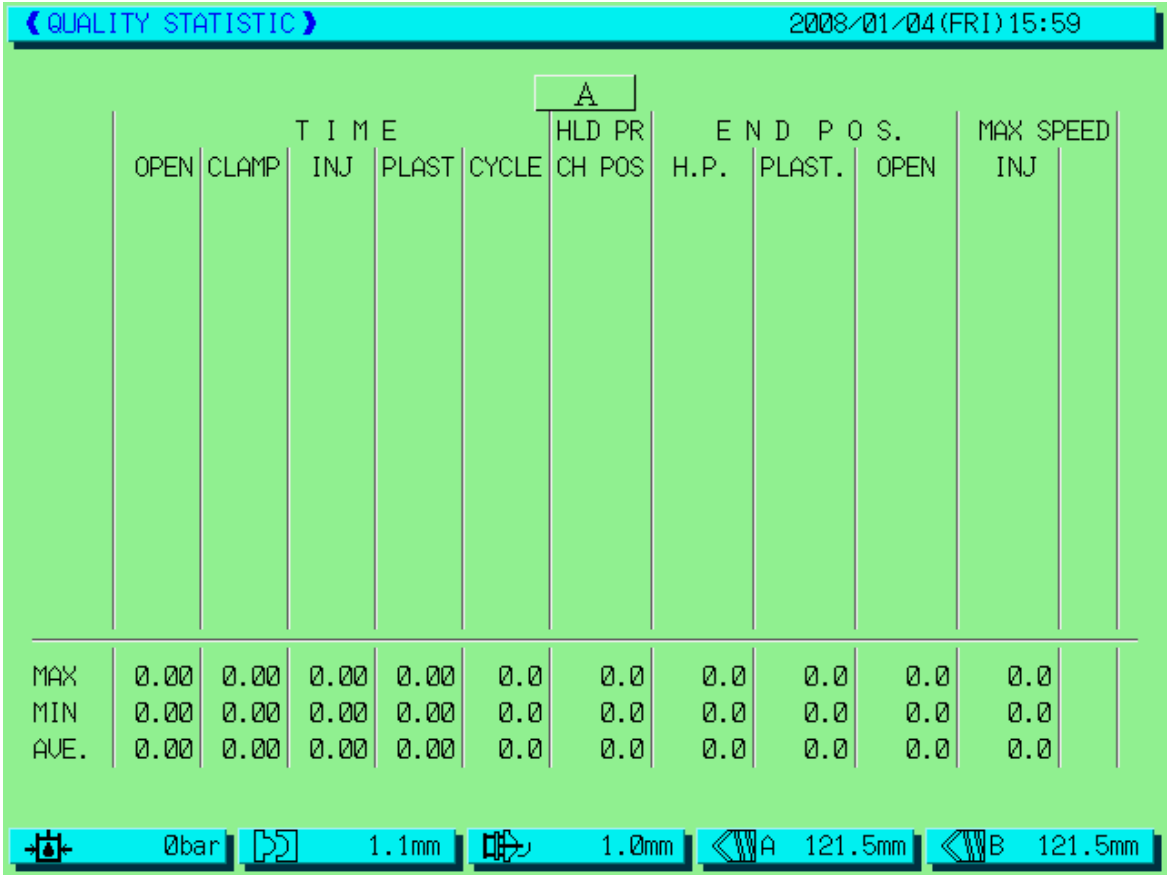
Each function has two status “Enabled” and “Disabled”. You can press 

or 

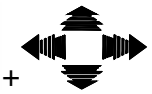
button to select between them.

（3） There are “Data reset” and “Save” function in the screen. You can press  button to activate the button, then press  button to complete the setting.

2、 Quality statistics display



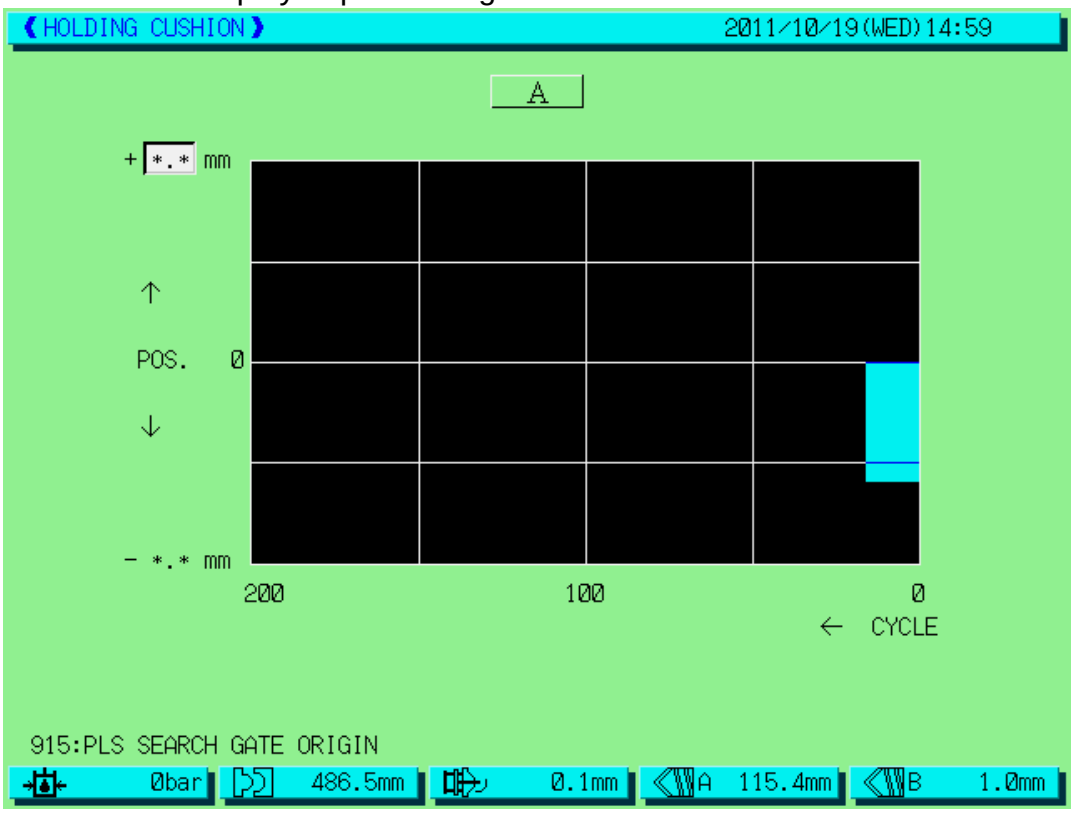
Screen (27)

（1）Press “Statistics” twice, or press CANCEL +  in screen (26) to call up the screen (27)

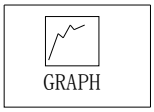
（2）The values shown in this screen cannot be modified. They are the parameters that have been tested by the computer.

3.2.17 Screen display of plasticizing

1、Screen display of plasticizing end



图（28）Screen (28)

（1） Press 

to call up the screen (28)

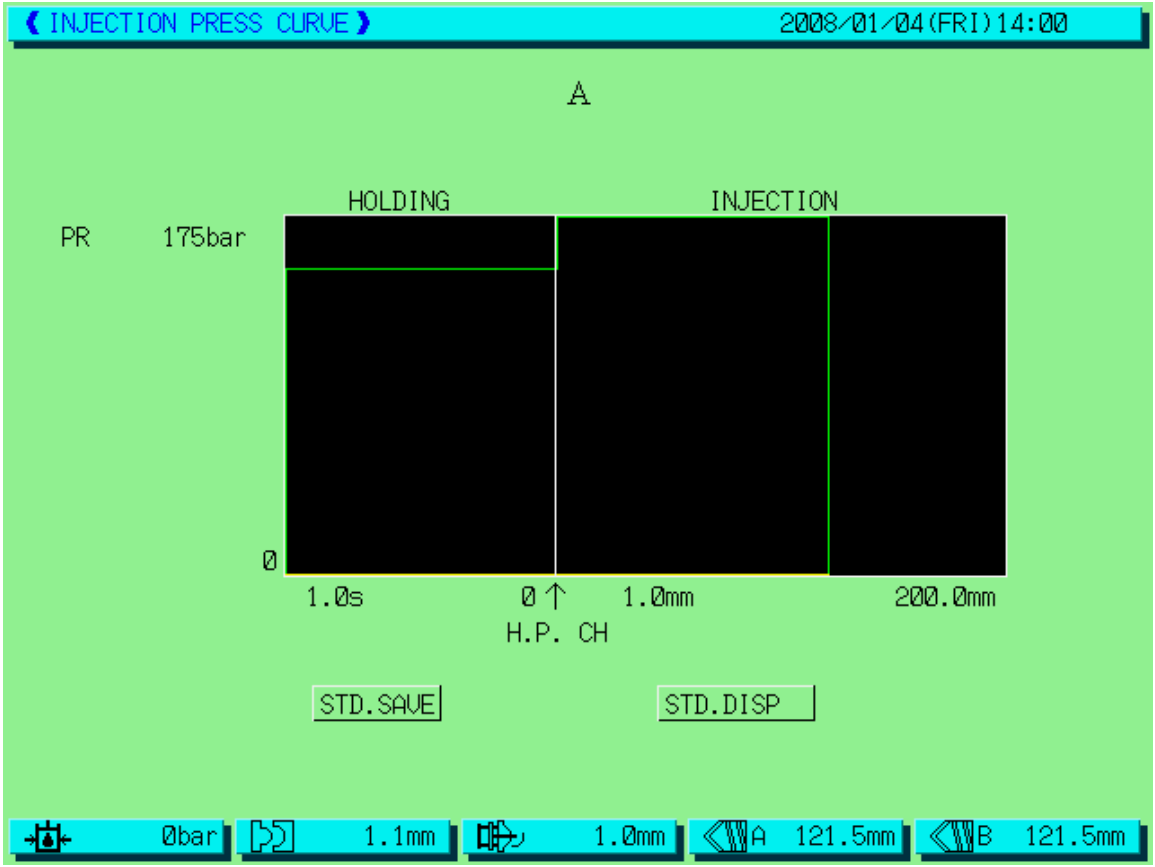
（2） The central position 0 is the setting value of position when the 4th stage plasticizing ends. The screen display is the ±value that the position when the actual plasticizing ends comparing with the position when the 4th stage plasticizing ends.

（3） To clear the screen, you can reset the data in the quality statistics screen.

（4） The screen display can be printed out by the computer.

（5） The maximum value of the coordinator in the screen display is 9.9mm, which can be set by inputting the value.

2、 Display of injection pressure curve



Screen (29)

（1） In screen （28）, press CANCEL + button to call up the screen (29).

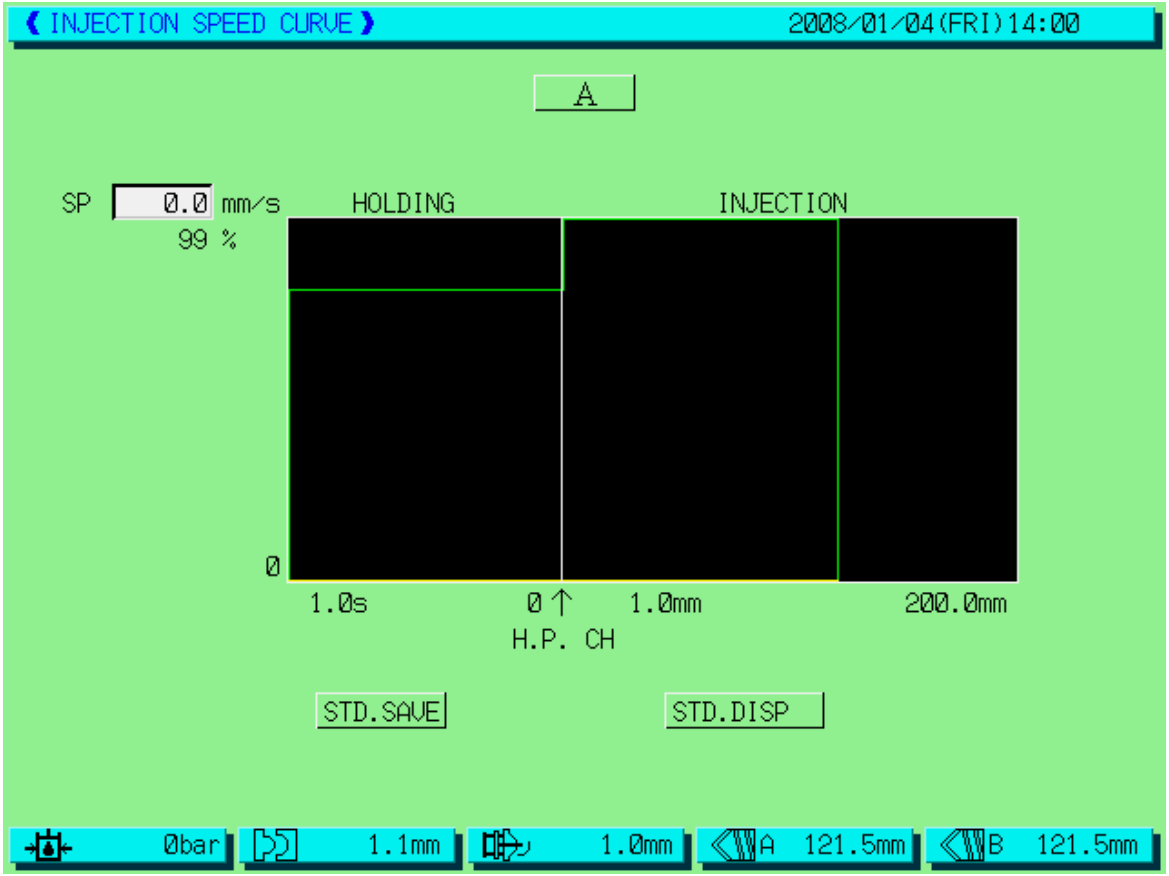
（2） This screen displays the pressure curve when the injection controlled by position switches to the pressing holding process controlled by time. The left is time control, the right is position control, and the 0 line in the middle is pressure holding switching position.

（3） This function has two items: “Standard save” and “Standard line display”. The “Standard save” function can define the current curve as the standard curve and save it. The “Standard line display” can read the saved standard line to compare with the actual curve.

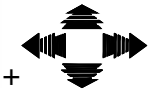
（4） To clear the screen, you can reset the data in the quality statistics screen.

（5） The screen display can be printed out by the computer.

3、Display of injection speed curve



Screen (30)

（1） In screen （29）, press  +  button to call up the screen (30).

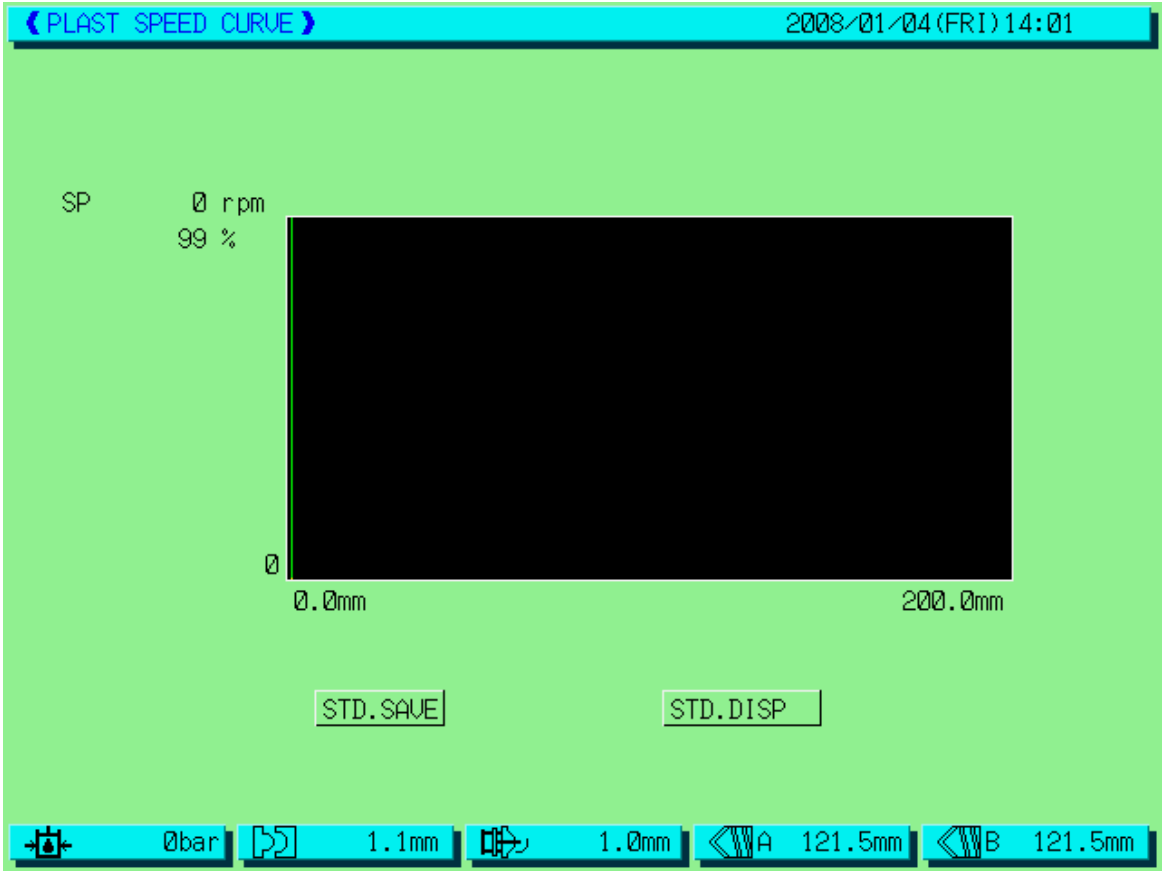
（2） This screen displays the speed curve when the injection controlled by position switches to the pressing holding process controlled by time. The left is time control, the right is position control, and the 0 line in the middle is pressure holding switching position. The maximum value of the speed parameter in the screen is 1999.9mm/s, which can be determined by inputting the intended value.

（3） This function has two items: “Standard save” and “Standard line display”. The “Standard save” function can define the current curve as the standard curve and save it. The “Standard line display” can read the saved standard line to compare with the actual curve.

（4） To clear the screen, you can reset the data in the quality statistics screen.

（5） The screen display can be printed out by the computer.

4、Display of plast back pressure curve



图（31）Screen (31)

（1） In screen （30）, press CANCEL + button to call up the screen (31).

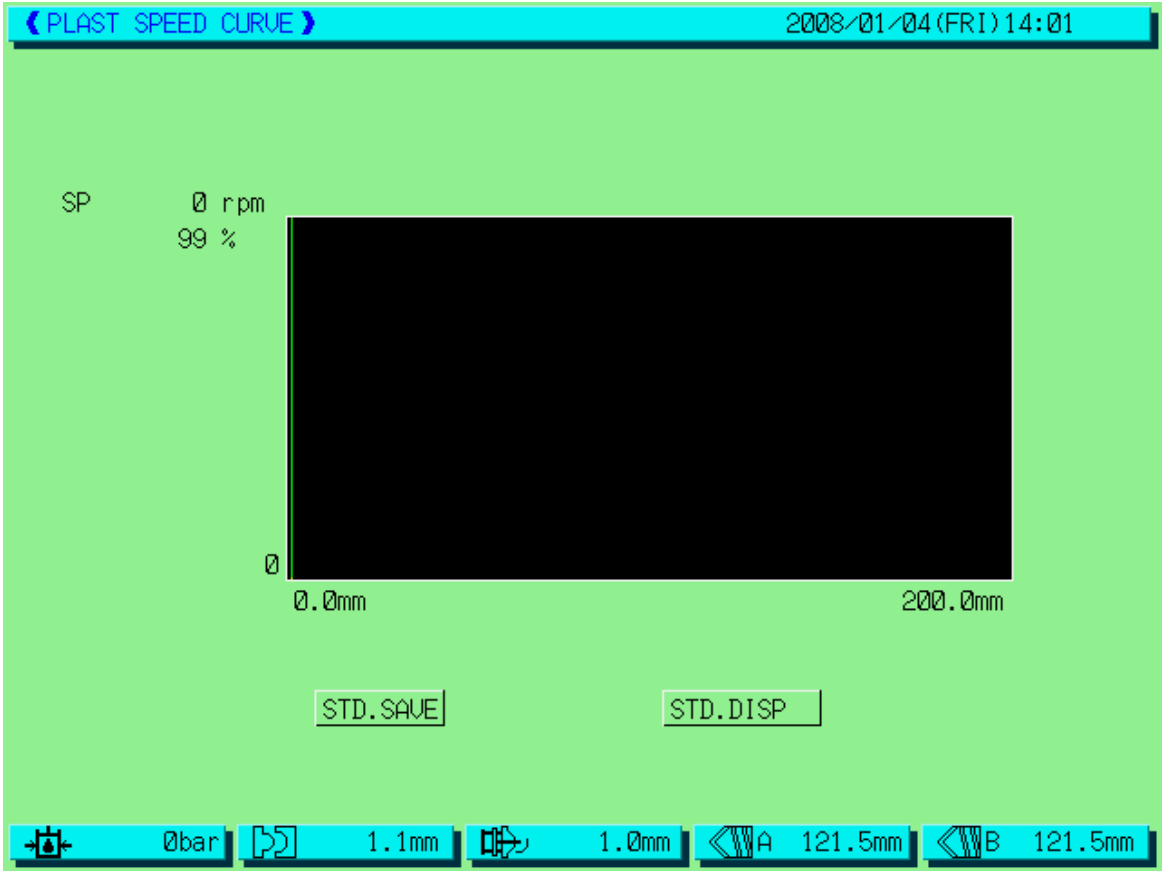
（2） The position coordinator in the screen refers to the position of the shaft when the plast is in process. The back pressure coordinator refers to the back pressure of the plast.

（3） This function has two items: “Standard save” and “Standard line display”. The “Standard save” function can define the current curve as the standard curve and save it. The “Standard line display” can read the saved standard line to compare with the actual curve.

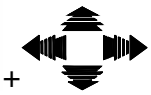
（4） To clear the screen, you can reset the data in the quality statistics screen.

（5） The screen display can be printed out by the computer.

5、Display of plast speed curve



Screen (32)

（6） In screen （31）, press  +  button to call the screen (32).

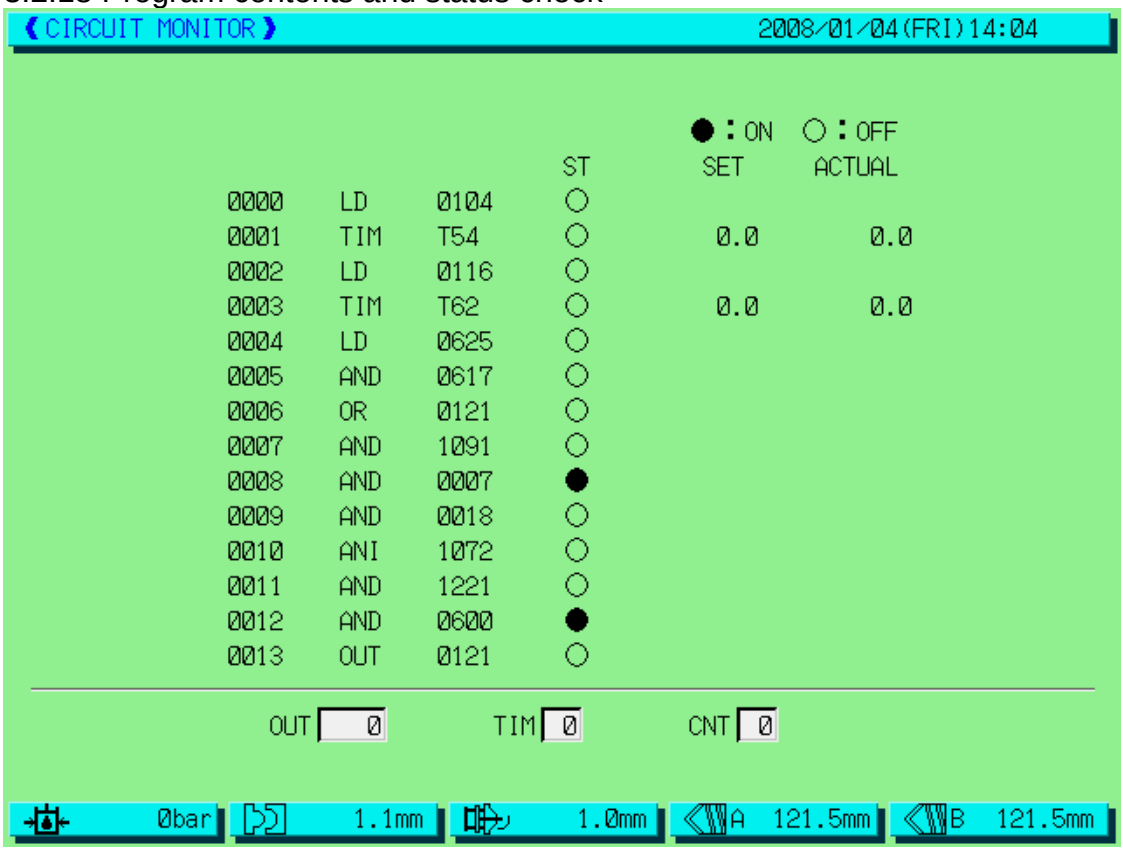
（7） The position coordinator in the screen refers to the position of the shaft when the plast is in process. The speed coordinator refers to the speed of the plast.

（8） This function has two items: “Standard save” and “Standard line display”. The “Standard save” function can define the current curve as the standard curve and save it. The “Standard line display” can read the saved standard line to compare with the actual curve.

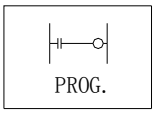
（9） To clear the screen, you can reset the data in the quality statistics screen.

（6） The screen display can be printed out by the computer.

3.2.18 Program contents and status check



Screen (33)

（1） Press 

to call up the screen (33)

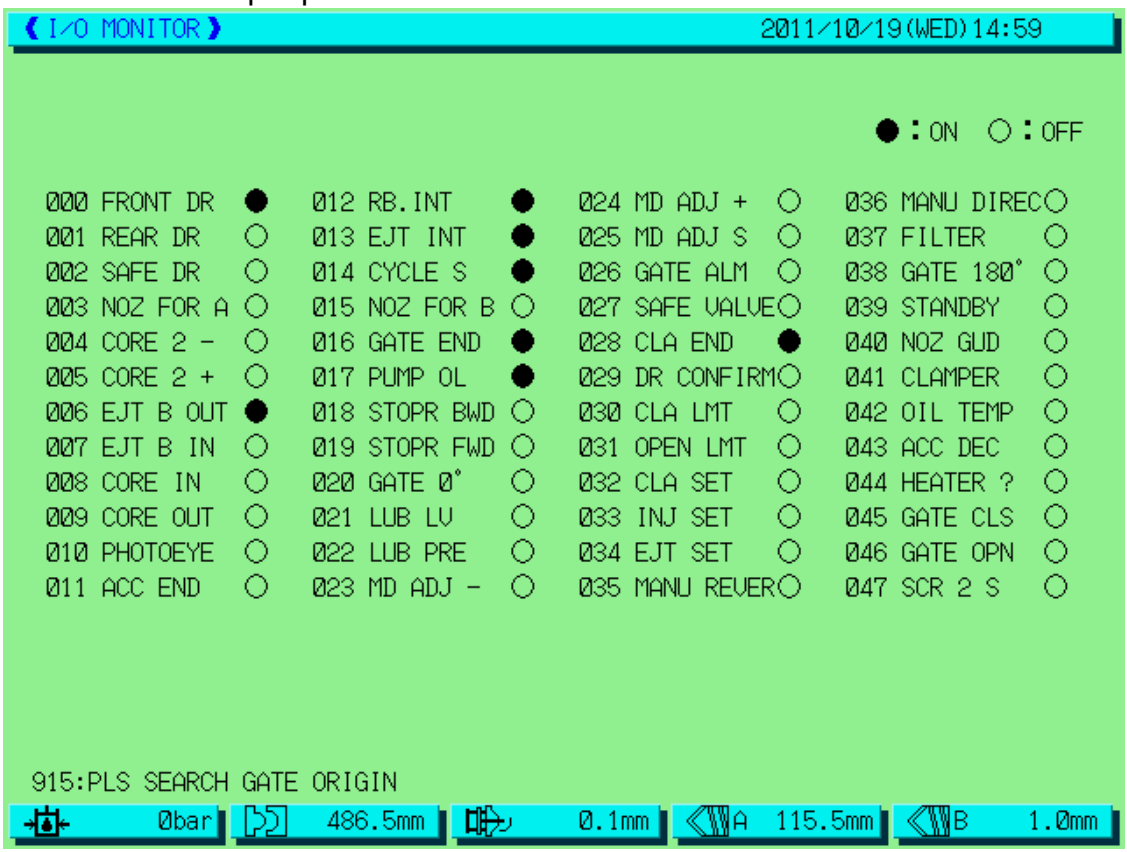
（2） This is a trapeziform graphics in the computer. When the dot below the status bar is black, it means there is signal. When the dot is with no color, it means there is no signal. You can press  button to scroll the display.

（3） There is a search function. Just input the circuit node value in the text area next to “OUT”“TIM”“CNT” and press 

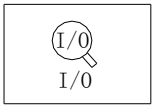
button. The circuit node to be searched will be shown in the screen.

3.2.19 Inspection on input and output

1、Monitor the input point



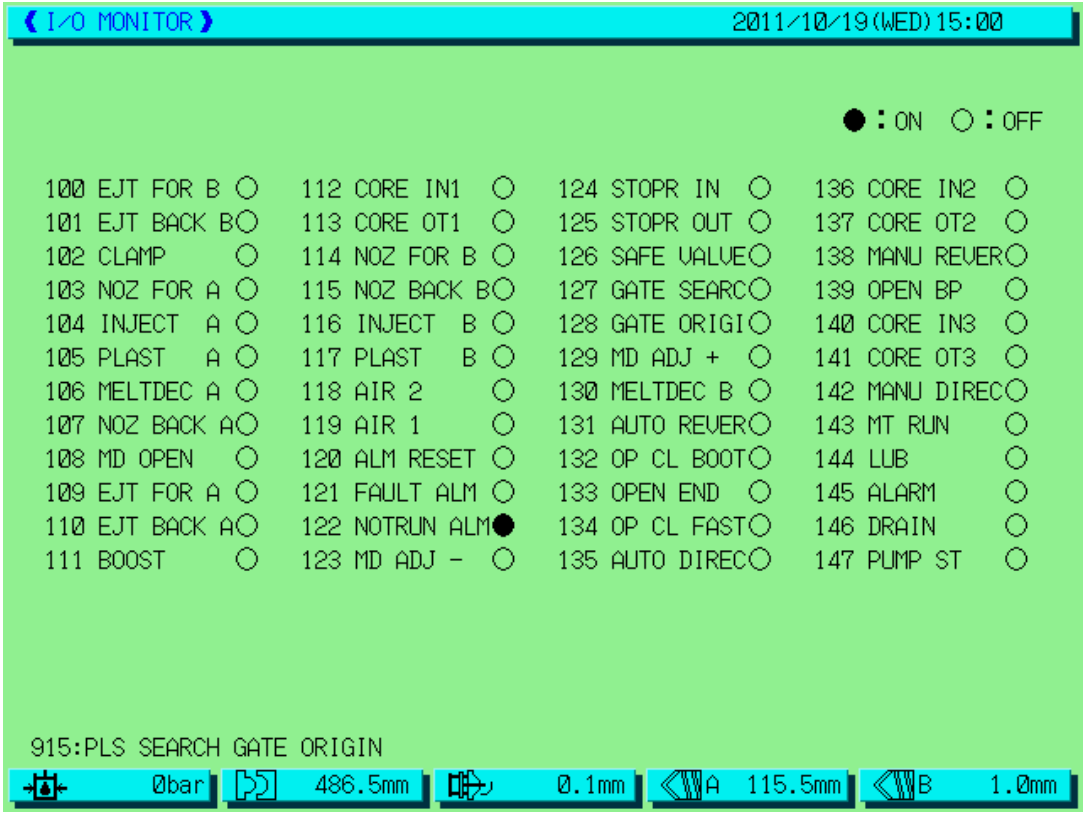
Screen (34)

（1） Keep pressing 

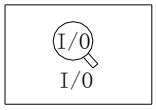
button to call up the screen (34)

（2） This screen shows the status of the input point of the machine. When the dot is black, it means there is signal. When the dot is white, it means there is signal. You can press  button to scroll the display.

2、Monitor the output point



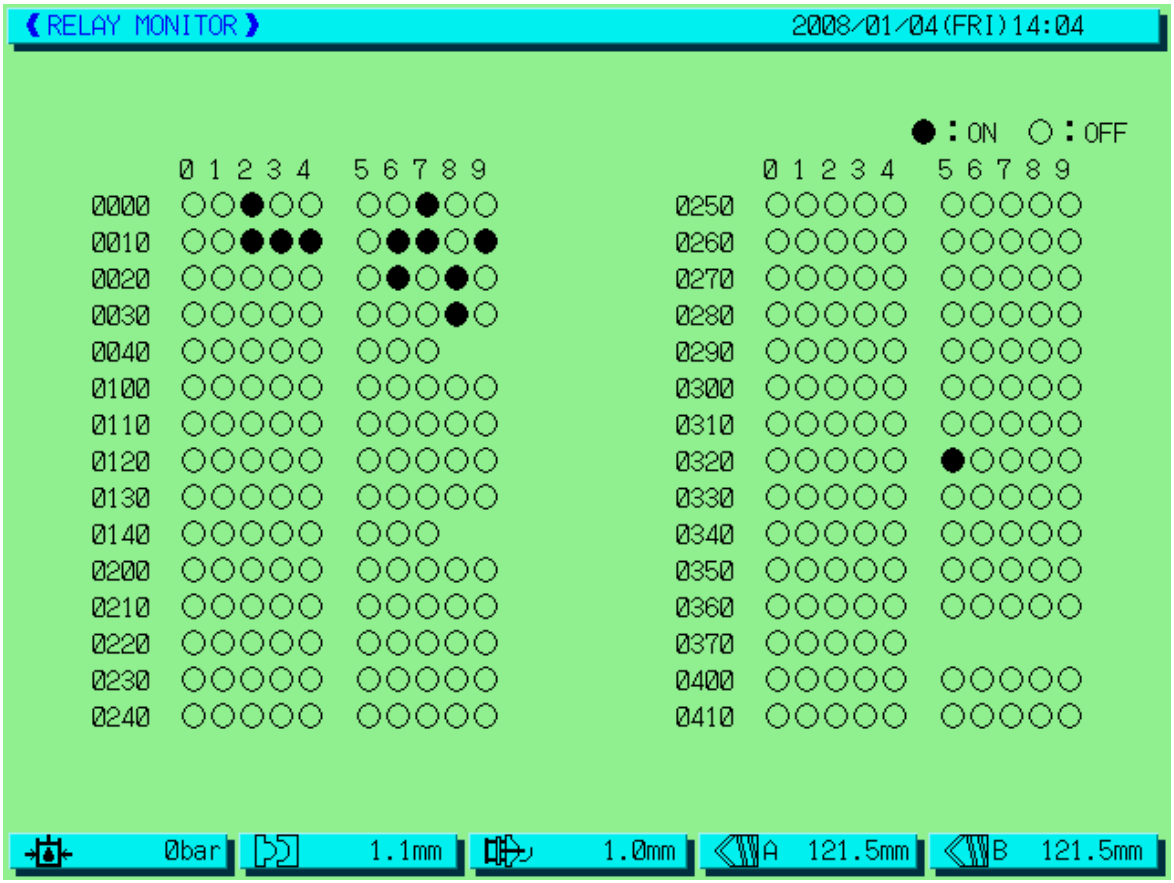
Screen (35)

(1) Keep pressing 

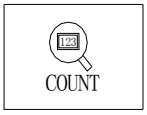
button to call up the screen (35)

(2) This screen shows the status of the input point of the machine. When the dot is black, it means there is signal. When the dot is white, it means there is signal. You can press  button to scroll the display.

3.2.20 Status monitor



图（36）Screen (36)

（1） Press 

to call up the screen (36)

（2） This screen shows the status of the internal relay in the program. The location of the dot is "××××" plus the column number. When the dot is black, it means there is signal. When the dot is white, it means there is signal. You can press  button to scroll the display.

3.2.21 Inspection on the time relay

1、Check on the counter

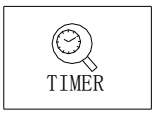
《TIMER MONITOR》 2011/10/19(WED)15:01

	SET	ACTUAL		SET	ACTUAL
INJECT A	5.00s	0.00s	GATE TIM	2.5s	0.0s
COOLING	5.0s	0.0s	NOZ BACK A	1.0s	0.0s
RECYCLE	1.0s	0.0s	Y → △	3.0s	0.0s
PLAST DL A	0.5s	0.0s	OPEN EJT	3.0s	0.0s
PRE.DECO A	0.5s	0.0s	MOLD ADJ CNT	3.0s	0.0s
CYC.ALAR	50.0s	0.0s	ALARM T1	10.0s	0.0s
LOW PRES.	3.0s	0.0s	ALARM CY	30.0s	0.0s
EJT DLY A	0.5s	0.0s	OUTPUT	90.0s	0.0s
GAS INJ	0.0s	0.0s	VENT	0.00s	0.00s
INJECT DL A	0.2s	0.0s	CLA. DLY	0.50s	0.00s
INJECT DL B	0.2s	0.0s	EJT. DLY	0.02s	0.02s
EJT PAUSE A	1.0s	0.0s	CORE DLY	0.00s	0.00s
CORE1 IN	0.0s	0.0s	SCREW DL	0.00s	0.00s
CORE1 OUT	0.0s	0.0s	LUBE PERIOD	15.0s	0.0s
SERVO ENAL	99.0s	0.0s	FAST CLP DLY	0.5s	0.5s
STOPR OUT DL	0.5s	0.5s	COLD START	3.0s	0.0s
GATE START	1.0s	0.0s	CORE2 IN	0.0s	0.0s

915:PLS SEARCH GATE ORIGIN

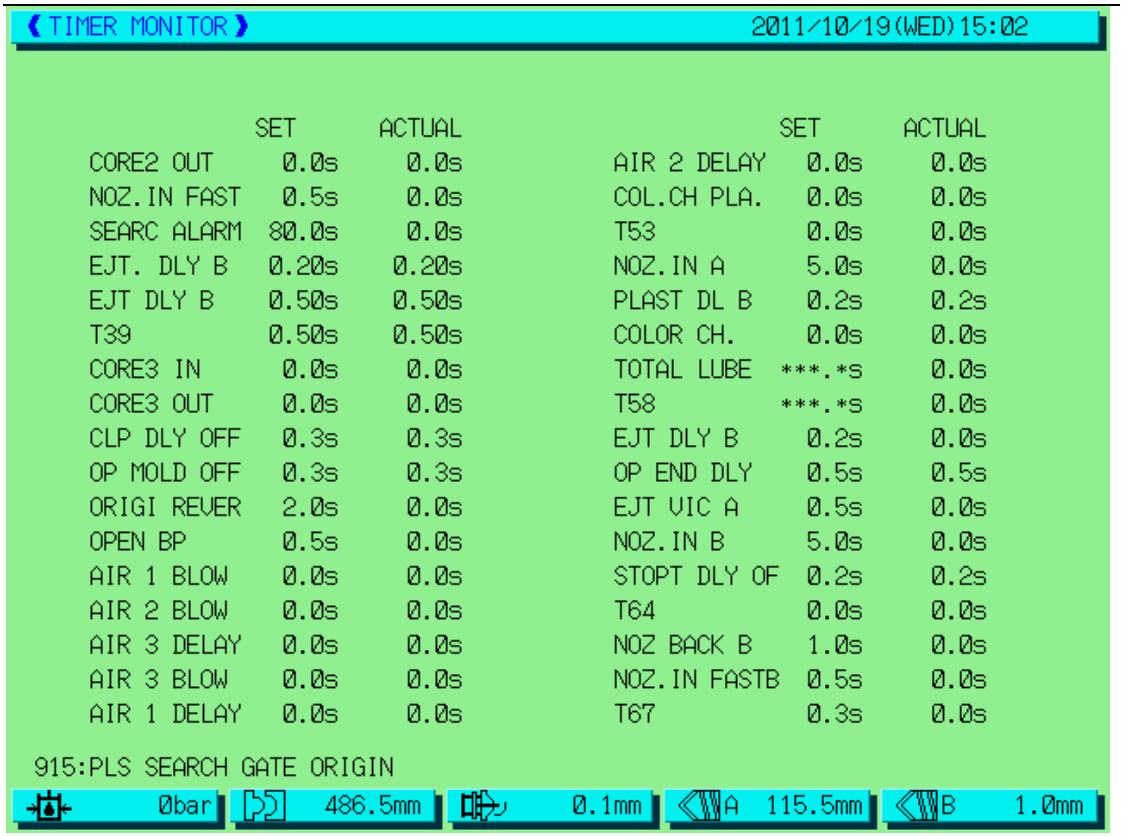
0bar | 486.5mm | 0.1mm | A 115.4mm | B 1.0mm

Screen (37)

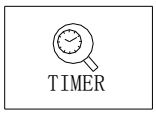


（1） Press to call up the screen (37)

（2） This screen can inspect the set value and current value of various time relays. Press  button to scroll the display.

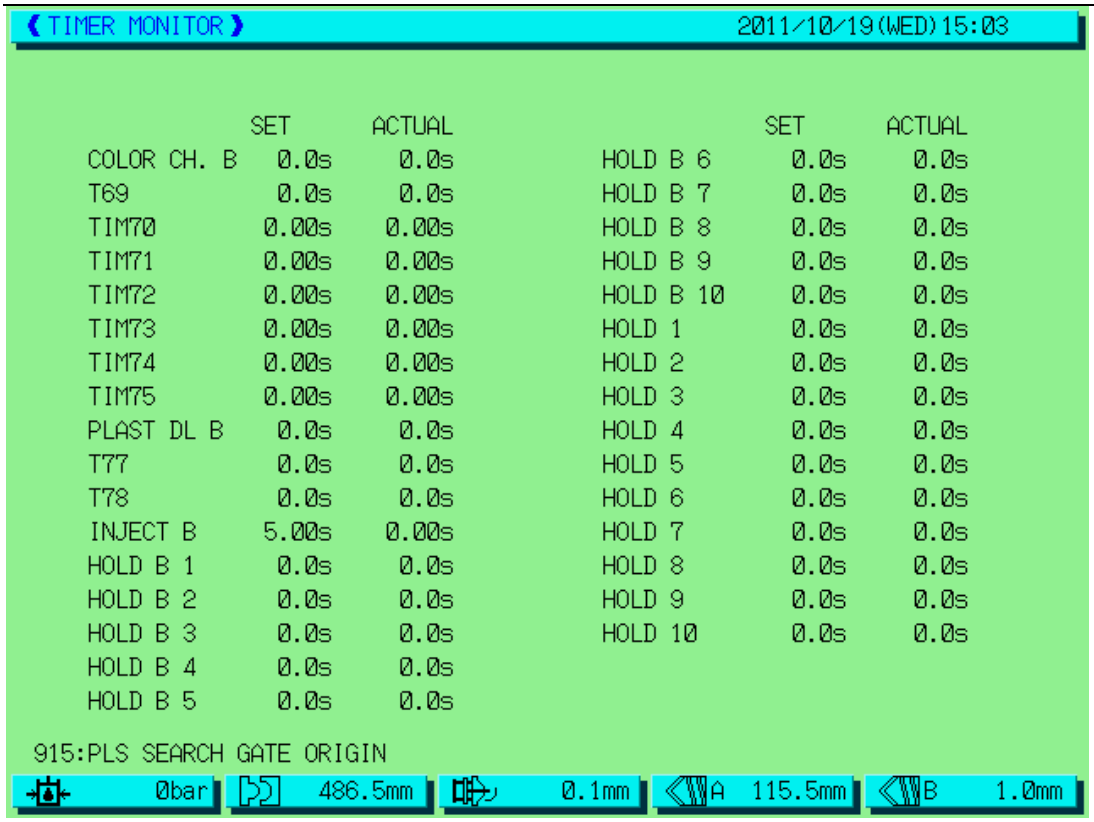


Screen (38)

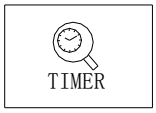
(1) Keep pressing 

to call up the screen (38)

(2) This screen can check the set value and current value of various time relays. Press  to scroll the display.



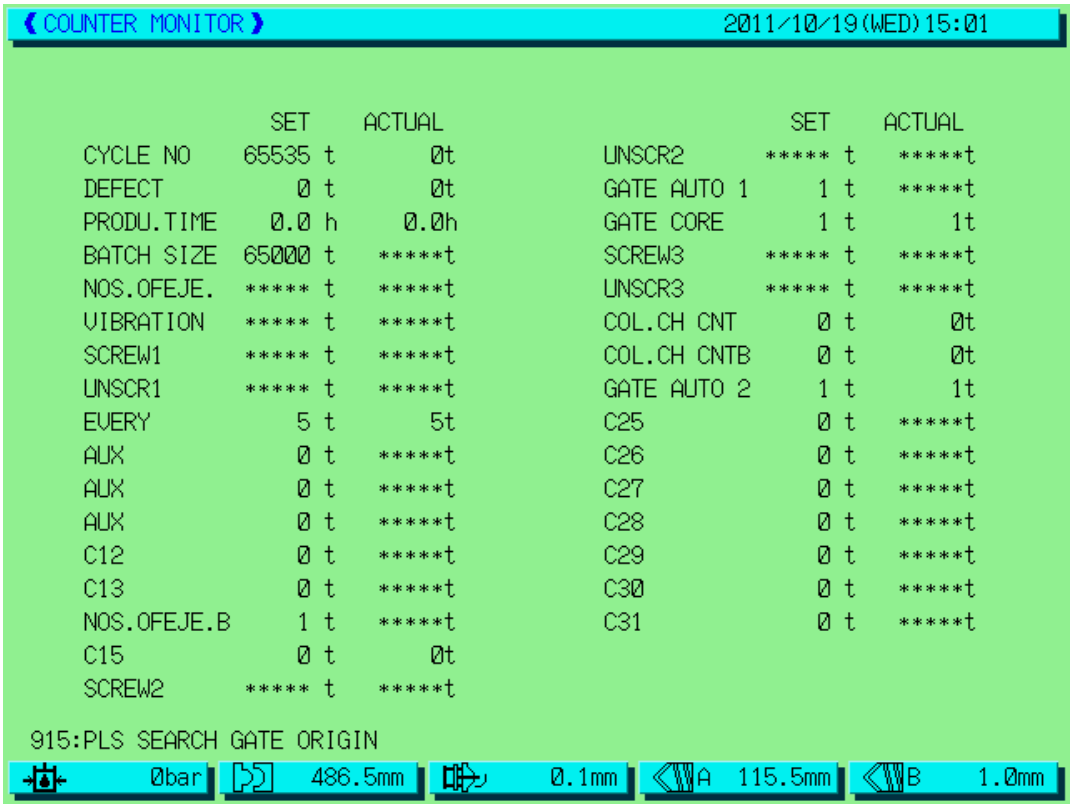
Screen (39)

(1) Keep pressing 

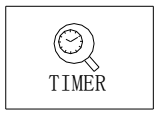
to call up the screen (39)

(2) This screen can check the set value and current value of various time relays. Press  to scroll the display.

3.2.22 Monitor counters



Screen (40)

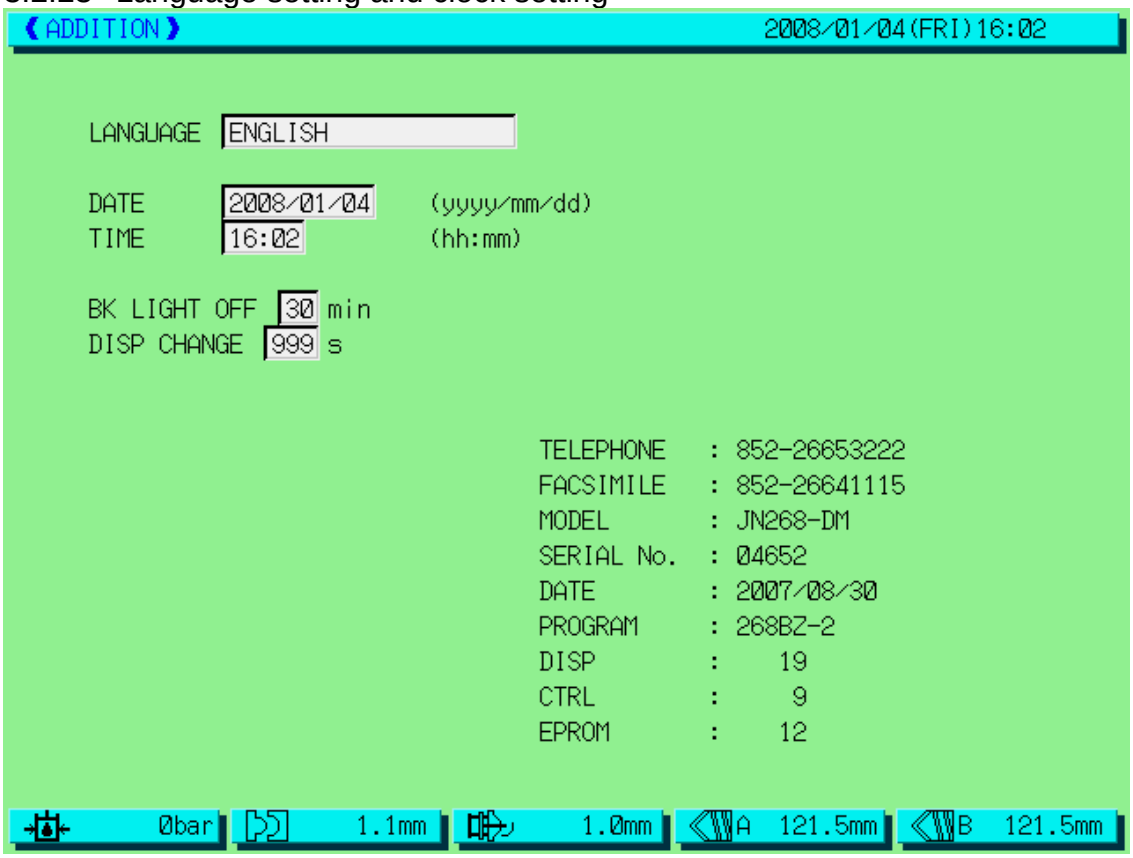
(1) Press 

to call up the screen (40)

(2) This screen can check the set value and current value of various counters.

Press  to scroll the display.

3.2.23 Language setting and clock setting



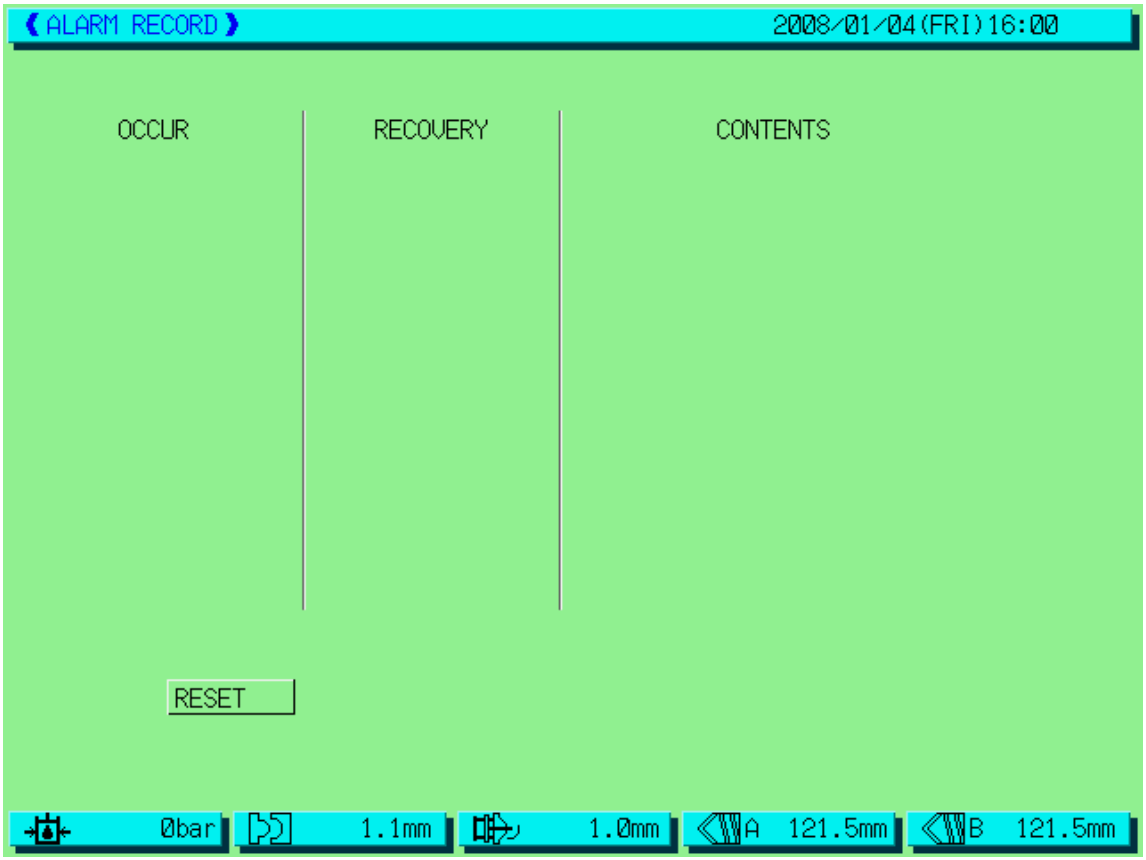
Screen (41)

（1） Press CANCEL + NOZZ to call up the screen (41)

（2） Press button to select the parameter to be modified. Input the intended value followed by pressing INPUT button to complete the setting.

The display is available in three languages: Chinese, Japanese and English. You can press ON or OFF to make the setting.

3.2.24 Historical alarm

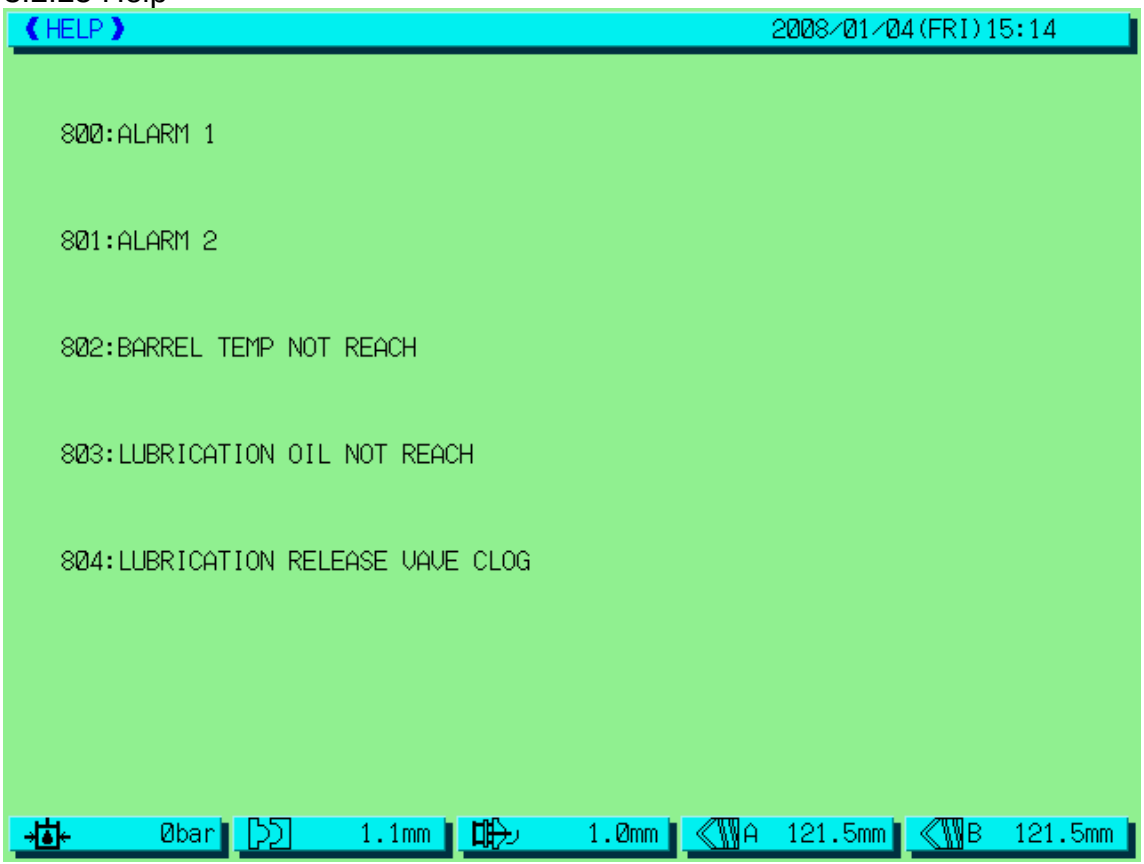


Screen (42)

（1）Press 

to call up the screen (42), which has the records of all previous alarms. Press “Data reset” to delete the records.

3.2.25 Help



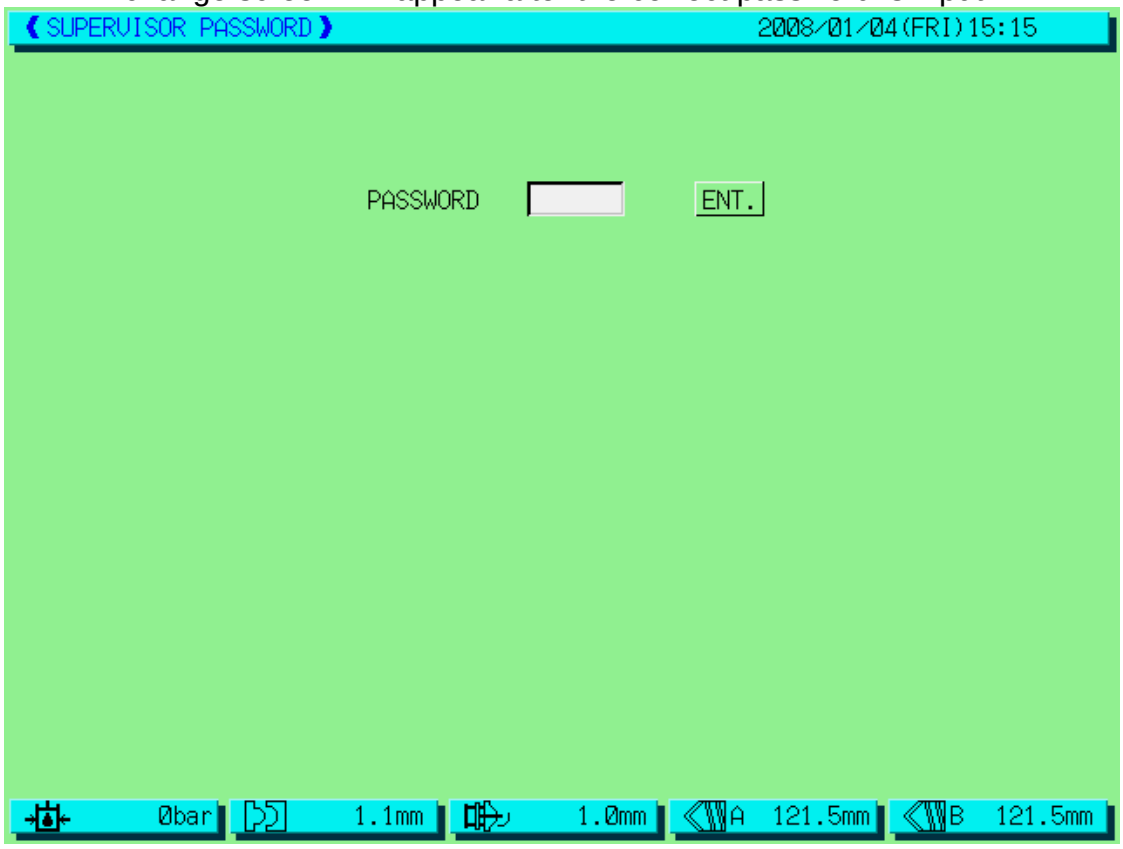
Screen (43)

（1）Press 

to call up the screen (43), which has some brief instructions on the machine.

3.2.26 Notes on password

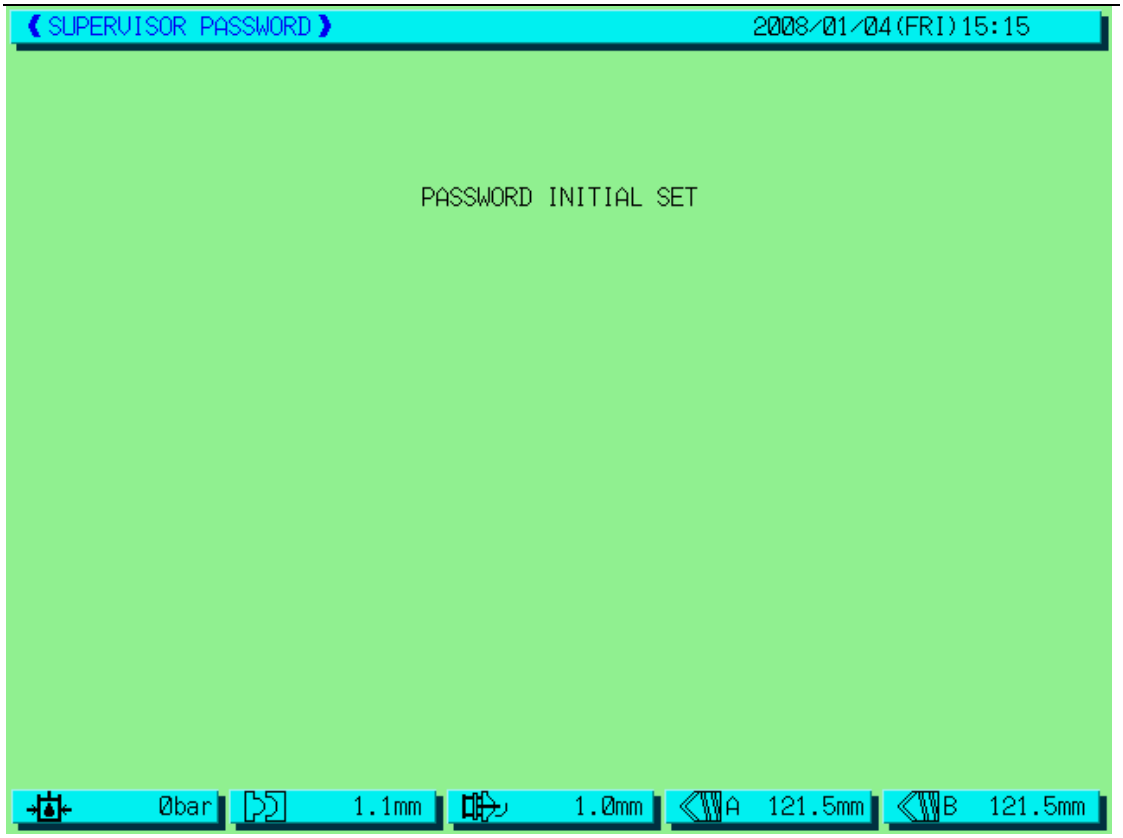
（1）This machine is equipped with a strict password protection function, which can prevent unauthorized data change. When the operator wants to make amendment on the important data, the follow screen (38) will show up to require the password input. The password change screen will appear after the correct password is input.



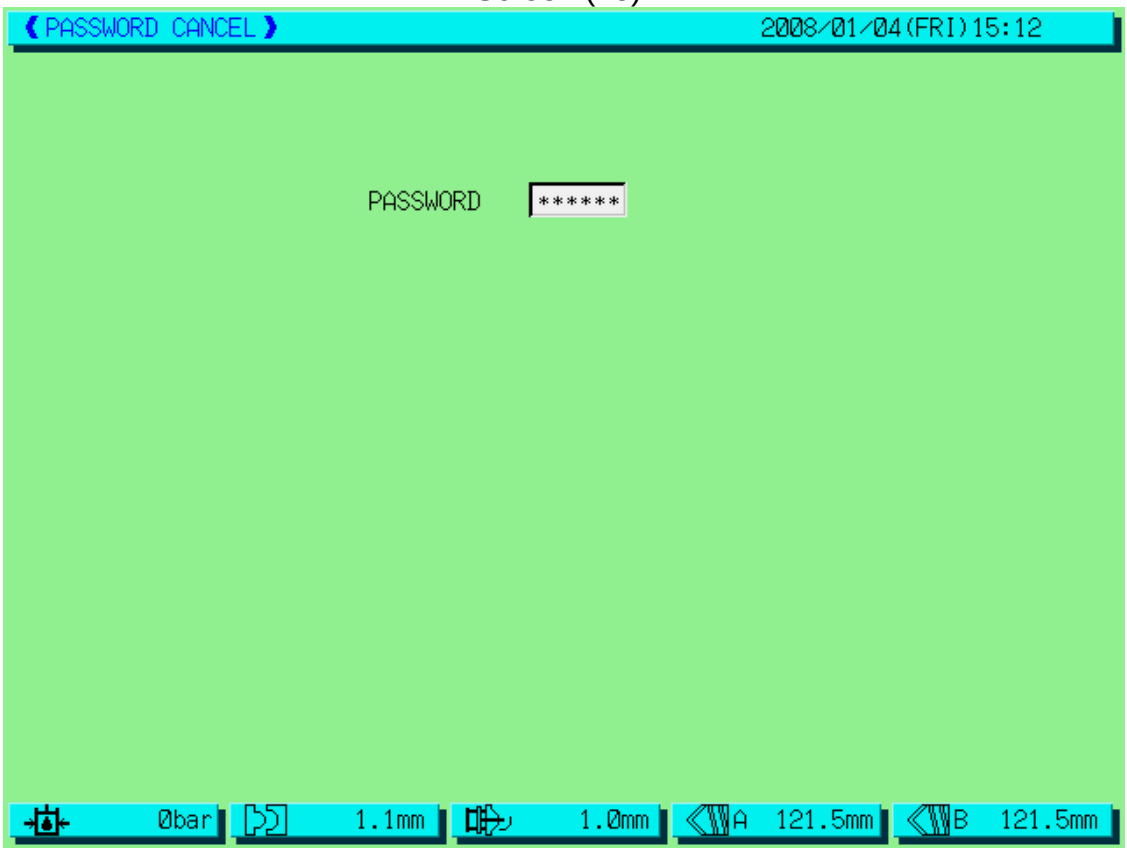
Screen (44)

（2）To allow the authorized operator to modify the data in a convenient way, the password can be removed. Press CANCEL + MELD. D to call up the screen (44). After the correct password is input, the screen (45) will appear, which means the password has been successfully removed. No password input will be required for further amendment on the data.

To resume the password protection function, just press CANCEL + INJ to input the correct password, or just reboot the system.



Screen (45)



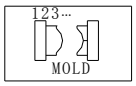
Screen (46)

（3） Password change

Screen (47)

Screen (48)

Press 

+ 

to call up the screen (47) and input the password. When the screen (48) appears, it means the password has been successfully changed.

3.3 Introduction on the computer alarm

RELAY№	中国語	英語
800	800:警报 1	800:ALARM 1
801	801:警报 2	801:ALARM 2
802	802:料管温度未达设定	802:BARREL TEMP NOT REACH
803	803:润滑油量不足	803:LUBRICATION OIL NOT REACH
804	804: 润滑器排水阀阻塞	804:LUBRICATION RELEASE VAVE CLOG
805	805:潤滑油漏油或不足	805:LUBRICATION OIL PRESS. TOO LOW
806	806:油馬達超過負荷	806:PUMP MOTOR OVERLOAD
807	807:調模馬達超負荷	807:MOLD ADJUST MOTOR OVERLOAD
808	808:後安全門未関閉	808:REAR DOOR NOT CLOSE
809	809:前安全門未関閉	809:FRONT DOOR NOT CLOSE
810	810:調模超出最小尺寸	810:MOLD ADJ MIN LIMIT
811	811:調模超出最大尺寸	811:MOLD ADJ MAX LIMIT
812	812:警報 3	812:ALARM 3
813	813:油馬達未啓動	813:PUMP MOTOR NOT START
814	814:鎖模行程已終止	814:CLAMP END
815	815:開模行程已終止	815:OPEN END 了
816	816:開模行程未終止	816:OPEN NOT END
817	817:頂針行程已終止	817:EJT FOR END
818	818:退針行程已終止	818:EJT BACK END
819	819:熔膠行程已終止	819:PLAST END
820	820:鬆退行程已終止	820:SCREW BACK END
821	821:請檢查射咀前進限位	821:CHECK NOZ FOR LIMIT
822	822:射咀保護蓋未関関	822:NOZZLE GUARD NOT CLOSE
823	823:射咀孔異物阻塞	823:NOZZLE BLOCK
824	824:熔膠量不足或溢料	824:SHORT SHOT OR OVER SHOT
825	825:料斗無料或阻塞	825:NO MATERIAL OR BLOCKED
826	826:成型模数已達設定	826:CYCLE COUNT COMPLETED
827	827:週期時間過長	827:CYCLE TIME TOO LONG
828	828:請清理模具内異物	828:PLEASE CLEAN UP THE MOLD
829	829:調模時間過長	829:MOLD ADJUST TOO LONG
830	830:潤滑中	830:LUBRICATION IN PROGRESS
831	831:請檢查機械手取出物	831:PLEASE CHECK ROBOT FIXTURE
832	832:製品確認訊號異常	832:TAKE OUT FAILURE
833	833:電眼感應片被遮	833:PHOTO CUT ALARM
834	834:切断電源重新開機	834:POWER OFF THEN ON AGAIN

835	835:油過濾網阻塞	835:OIL FILTER CLOG
836	836:循環油度過低	836:OIL TEMP TOO LOW
837	837:循環油度過高	837:OIL TEMP TOO HIGH
838	838:自動模具替換中	838:AUTO MOLD CHANGE
839	839:半螺母位置不對	839:NUT CLOSING NOT ALIGN
840	840:請檢查抽芯限位開関	840:CHECK CORE PULL LIMIT
841	841:請檢查旋轉盆限位開関	841:CHECK GATE IN/OUT LIMIT
842	842:請檢查頂針限位開関	842:CHECK EJECTOR LIMIT
843	843:請檢查自動門安全閥	843:CHECK VALVE FOR DOOR
844	844:大油缸未回定位	844:BIG CYLINDER NOT LOCATED
845	845:開模洩壓異常	845:OPEN PRESSURE RELEASE TROUBLE
847	847:鎖模力受力中	847:CLAMPING IN PROGRESS
848	848:蓄壓器充壓異常	848:ACC CHARGE ALARM
849	849:液壓油油量不足	849:OIL LEVEL TOO LOW
850	850:調模計數開関故障	850:MOLD ADJUST SENSOR TROUBLE
851	851:調模齒輪異常檢查	851:MOLD ADJUST GEAR TROUBLE
852	852:模具安裝位置檢查	852:MOLD FITTING POSITION CHECK
853	853:油壓夾模異常檢查	853:HYDRAULIC CLAMP TROUBLE
854	854:鎖模力不足檢查	854:CLAMP FORCE NOT ENOUGH
855	855:機械手氣壓不足	855:AIR PRESSURE FOR ROBOT TOO LOW
856	856:背壓調整過高	856:BACK PRESSURE TOO HIGH
857	857:自動原料替換運行	857:MATERIAL CHANGE IN PROGRESS
858	858:料管度預熱中	858:PREHEAT IN PROGRESS
859	859:絞芽計數開関檢查	859:CHECK UNSCREW COUNTING SENSOR
860	860:模厚自動調整中	860:AUTO MD THICK ADJ IN PROGRESS
861	861:鎖模力自動調整中	861:AUTO MD CLA FORCE ADJ IN PROG
862	862:換模台限位器檢查	862:AMC TABLE L.S. ERROR
863	863:壓力檢測訊號異常	863:PRESSURE SENSOR DETECT ERROR
864	864:熔膠轉測開関檢查	864:PLAST RPM SENSOR DETECT ERROR
865	865:電箱門未関	865:CONTROL CABINET DOOR NOT CLOSE
866	866:電脳内部電池更換	866:CHANGE BATTERY
867	867:鎖模力自動調整完成	867:AUTO MD CLA FORCE COMPLETE
868	868:模厚自動調整完成	868:AUTO MD THICK ADJ COMPLETE

869	869:成品不良、檢查四段位置時間設定	869:INJECTION SETTING NO GOOD
870	870:料管實際度過高	870:BARREL TEMPERATURE TOO HIGH
871	871:熔膠延時中	871:PLASTICIZATION DELAY
872	872:調模中	872:MOLD ADJUST IN PROGRESS
873	873:轉盤中	873:TABLE IN ROTATION
874	874:定位桿末退	874:STOPPER NOT RETURN
875	875:自動調摸故障	875:AUTO MOLD ADJUST ERROR
876	876:踏板故障	876:STEPPER ERROR
877	877:請按電源制時	877:PUSH POWER ON SWITCH TWICE
878	878:頂針板末退	878:EJECTOR PLATE NOT RETURN
879	879:安全閥故障	879:SAFETY VALVE ERROR
880	880:開鎖模故障	880:MOLD CLAMP OPEN ALARM
881	881:安全門限位器故障	881:DOOR LIMIT SWITCH ERROR
882	882:門機械鎖故障	882:DOOR LATCH ERROR
883	883:氣壓不足	883:AIR PRESSURE NOT ENOUGH
884	884:安全鎖油掣故障	884:SAFETY VALVE ERROR
885	885:未熔膠	885:PLASTICIZATION NOT DONE
886	886:成品未脫	886:PREFORM NOT DROP
887	887:開模終止故障	887:MOLD OPEN END ERROR
888	888:熔膠中	888:PLASTICIZATION INPROGRESS
889	889:機械手安全限位故障	889:ROBOT SAFETY CHECK ERROR
890	890:機械手末回零位	890:ROBOT NOT ZERO RETURN
891	891:機械手故障	891:ROBOT ALARM
892	892:伺服控制故障	892:SERVO CONTROL ALARM
893	893:成品頂出故障	893:PRODUT EJECT OUT ERROR
894	894:開模終止位置故障	894:OPEN END POSITION ERROR
895	895:安全鎖模檢出故障	895:SAFETY CLOSE CHECK ERROR
896	896:熔膠末終止	896:PLASTICIZATION NOT END
897	897:模胚末脫	897:PREFORM NOT DROP
898	898:清除料筒膠料	898:CLEAN UP BARREL
899	899:調整功能動中	899:ADJUSTMENT!
900	900:入闸未终止	900:GATE IN NOT END
901	901:料筒实际温度过低	901:BARREL TEMPERATURE TOO LOW
902	902:安全门限位故障	902:SAFETY DOOR LIMIT ERROR
903	903:安全门互锁故障	903:SAFETY DOOR LATCH ERROR
904	904:定位针未顶出至限位	904:STOPR NOT FWD TO LIMIT
905	905 定位针已出至限位	905:STOPR FWD TO LIMIT
906	906:定位针已退至限位	906:STOPR BWD TO LIMIT

907	907:辅顶针已退	907:EJECTOR B BWD TO LIMIT
908	908:辅顶针已顶出	908:EJECTOR B FWD TO LIMIT
909	909:辅熔胶已完成	909:PLAST B END
910	910:辅松退已完成	910:SCREW BACK B END
911	911:B 顶针未退	911:EJT BACK B NOT END
912	912:转盘未回零位	912:GATE NOT COME ORIGIN
913	913:定位针未退	913:STOPR NOT BWD TO LIMIT
914	914: A 顶针未退	914: EJT BACK A NOT END
915	915:请寻转盘零位	915:PLS SEARCH GATE ORIGIN
916	916:请按手动逆转	916: PLS PRESS MANU REVER
917	907:请按手动顺转	917: PLS PRESS MANU DIREC
918	918:转轴已出至限位	918: SHAFT FWD TO LIMIT
919	919:转轴已退至限位	919: SHAFT BWD TO LIMIT
920	920:寻转盘零位故障	920: SEARCH GATE ORIGIN ERROR