KINGGLE SMART
全自动中空吹塑机使用说明

Automatic blow molding machine operation manual

本手册主要介绍中大型系列塑料中空吹塑机的界面的通用操作。适用机型主要包含 KGB80A ;KGB90A ;KGB100A; KGB100B; KGB110A; KGB120E;实际操作界面可能会有略微差异。本手册适用对象为设备操作工、维护人员及其他相关技术、管理人员。
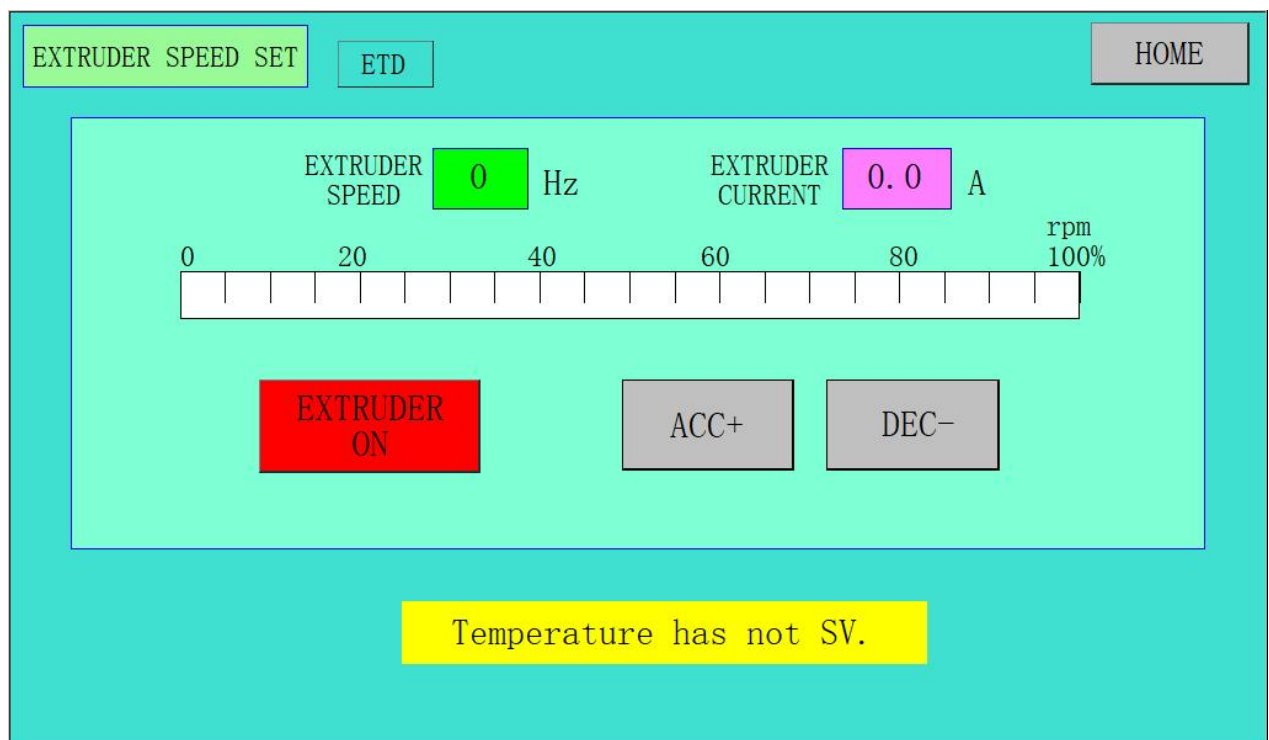
This manual mainly introduces the general operation of the interface of medium and large series of plastic hollow blow molding machines. Applicable models mainly include KGB80A ;KGB90A ;KGB100A; KGB100B; KGB110A; KGB120E; the actual operation interface may be slightly different. This manual is applicable to equipment operators, maintenance personnel and other related technical and management personnel.

目录表

manual

KINGLE ®
金戈智能装备
KINGGLE SMART MACHINERY

1、主页面 Main page

服务热线：400-089-9988　**KINGLE** ® 金戈智能 KINGGLE SMART　2021.02.06　15．59．08

| PUMP ON | MANUAL | STOP | AUTO | MANUAL | TEMP SET |

| SERVO PUMP ON | | | | TIME SET | PRESSURE |

COUNTER	0	A
CYCLE T	0	S
PRESSURE	0	%
HEAT TIME	0	M

EXTRUDER SPEED

FUNCTION　IN/OUT

HEAT ON

MONITOR　ALARM

POSITION　PARISON

13	12	11	10	09	08	07	06	05	04	03	02	01
TEMP： 0	0	0	0	0	0	0	0	0	0	0	0	0

EXTRUDER SPEED SET　ETD　HOME

EXTRUDER SPEED　0　Hz　EXTRUDER CURRENT　0.0　A

0　20　40　60　80　rpm 100%

| EXTRUDER ON | ACC+ | DEC− |

Temperature has not SV.

主油泵启动：用于启动油路系统油泵电机；

Main oil pump start: used to start oil pump motor of oil system;

壁厚泵启动：在设备加温达到 3-4 小时后， 启动壁厚控制油泵电机；

Start the wall thickness pump: start the wall thickness control oil pump motor after machine heating 3-4 hours;

挤料启动： 在壁厚泵启动后，显示壁厚控制器全画面后启动外层电机，调节方式

Extrusion start: after the wall thickness pump is started,show full thickness controller ,start the motor ,adjusting mode

加热开关：用于整机加热启动开关， 在加热开关启动前必须接通机器上平台冷却水及模头冷却水，确保冷却水通畅，在设备升温时，需观察电控箱内的加热空气开关有无关闭，接触器吸合频率是否正常；

Heating switch: it is used to start the heating switch of the whole machine. Before starting the heating switch, the cooling water of the upper platform of the machine , the cooling water of the die head must be connected ,to ensure that the cooling water is unobstructed. When the equipment is heating up, it is necessary to observe whether the heating air switch in the electric control box is closed and whether the contactor closing frequency is normal

手动：用于设备调试过程中选择手动动作运行；

Manual operation: it is used to select manual operation during machine adjusting;

停止：用于设备在运行中与设备检修中使用开关；

Stop: used to switch the equipment in operation and maintenance;

自动：在设备动作正常后，用于自动选择后，按启动按钮后自动运行启动

Automatical: After the machine operation normally.for automatic selection ,press the start button operation automatically

手动操作：用于选择手动按钮后，使用手动操作内按钮使用；（详细见手动操作界面介绍）

Manual operation: After selecting the manual button ,use the manual operation internal button(see the manual operation interface for detailes)

温度设定：用于设定整机温度设定，与上限温度，下限温度；（详细见温度设定界面介绍）

Temperture setting : Used to set the temperature of the whole machine ,the upper limit temperature and the lower limit temperature (see the introduction of the temperature setting interface for details)

时间设定：用于设定自动运行时，所有配合时间设定(详细见时间设定界面介绍)

Time setting:It is used to the automatical running ,all the match time set(see the time setting introduction)

压力设定：用于设备液压动作速度设定，最高为 100%；(详细见压力设定界面介绍)

Pressure setting: It is used to set the hydraulic operation and speed ,max up to 100%(detailed check the introduction of pressure set unterface)
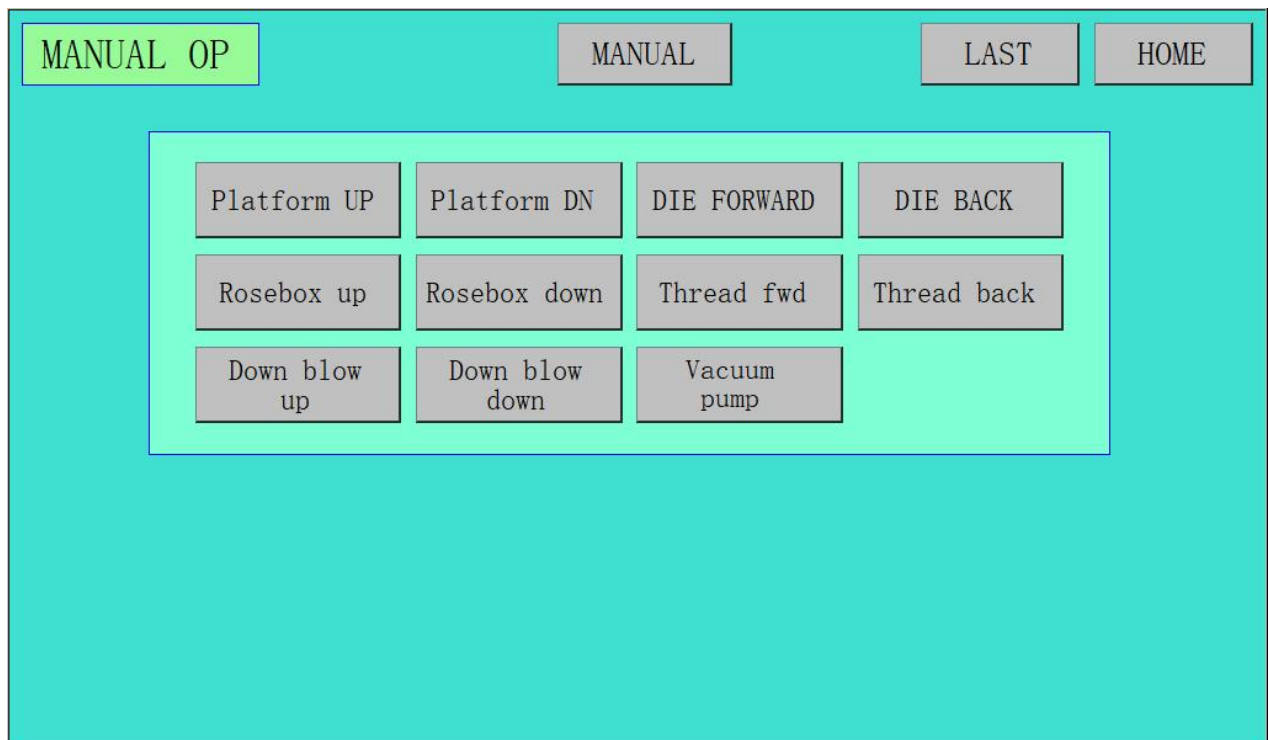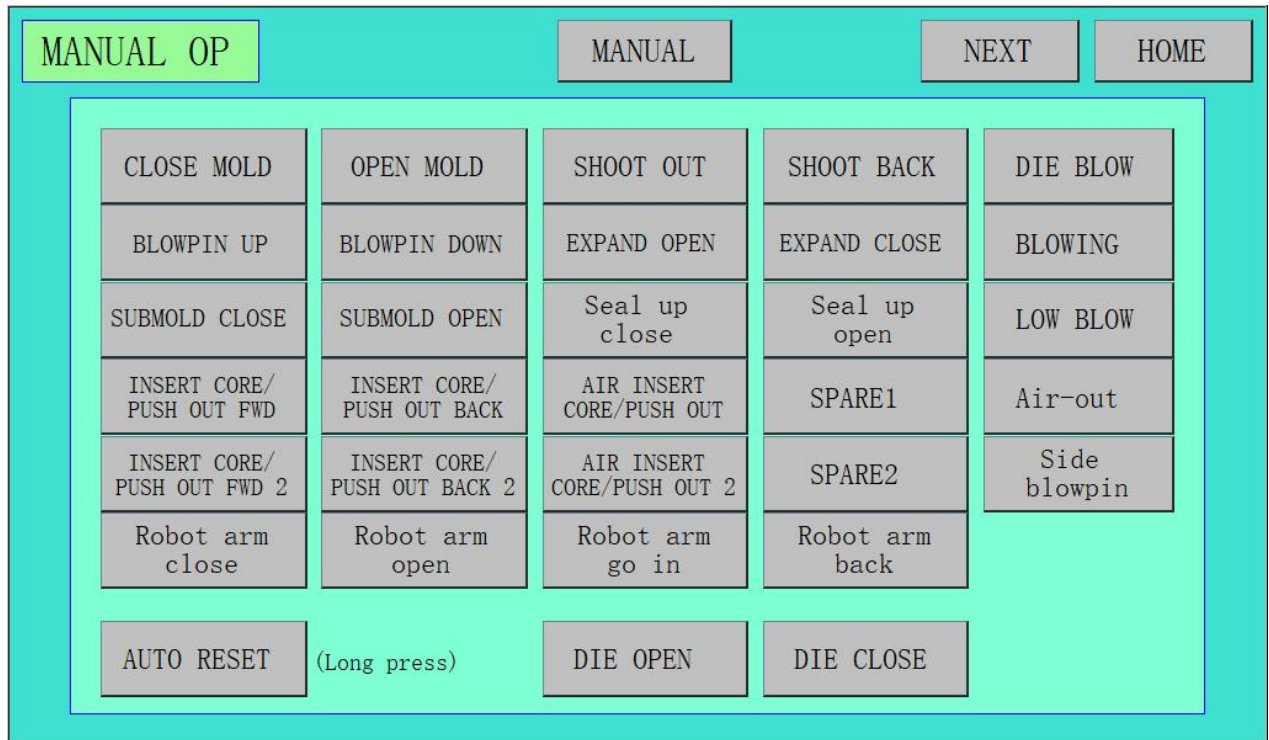
功能选择：选择适合产品生产的正确功能使用；(详细见功能选择界面介绍)

Function selection: select the right function suitable for product production(see the function selection interface for details)

输入输出：用于监视机器电脑板输入信号与输出信号（详细见输入输出界面介绍）

Input and output: it is used to monitor the input and output singals of the computer board of the machine (see the introduction of the input and output interface for details)

2. 手动操作 manual operate

MANUAL OP		MANUAL		NEXT HOME

CLOSE MOLD	OPEN MOLD	SHOOT OUT	SHOOT BACK	DIE BLOW
BLOWPIN UP	BLOWPIN DOWN	EXPAND OPEN	EXPAND CLOSE	BLOWING
SUBMOLD CLOSE	SUBMOLD OPEN	Seal up close	Seal up open	LOW BLOW
INSERT CORE/ PUSH OUT FWD	INSERT CORE/ PUSH OUT BACK	AIR INSERT CORE/PUSH OUT	SPARE1	Air-out
INSERT CORE/ PUSH OUT FWD 2	INSERT CORE/ PUSH OUT BACK 2	AIR INSERT CORE/PUSH OUT 2	SPARE2	Side blowpin
Robot arm close	Robot arm open	Robot arm go in	Robot arm back	

AUTO RESET	(Long press)	DIE OPEN	DIE CLOSE

MANUAL OP		MANUAL		LAST HOME

Platform UP	Platform DN	DIE FORWARD	DIE BACK
Rosebox up	Rosebox down	Thread fwd	Thread back
Down blow up	Down blow down	Vacuum pump	

合模：在确保安全光幕正常情况下，按合模按钮，注意人员与操作对面人员安

全下使用；

Clamping :under the normal condition of ensuring the safety screen ,pressure the mold closing botton and pay attention to the safety of operators.

开模：在确保后模板无异物遮挡情况下，按开模后，模板相对称打开，（开合模移动位置，需要加注润滑油每天一次加注频率）

Clamping:under the condition of ensuring that there is no foreign matter on the back template ,press the mold opening button to open the template symmtrically ,(mold openning and closing move position ,need to add lubricating oil per day)

射料：在达到实际温度达到设定温度后 3-4 小时，副油泵启动后，方可使用射料，主要用于手动射料，首次射料，人员远离出料口，以免被高温原材料烫伤。

Injection:after up to the setting temperature 3-4 hours ,sub oil pump start ,it can used for the injection ,mainly to used for manual injection ,first injection ,keep personnel away from discharge port to avoid by high temperature raw material .

射回：实际温度达到设定温度后 3-4 小时，副油泵启动后，方可使用，用于将射料油缸射退；

Injection back:after up to setting temperature 3-4 hours ,the sub oil pump start ,it can used for injection oil cylinder,it is used for ejection cylinder back.

模头吹气：用于手动模头吹气测试；

Die head blowing: it is used for blowing testing by hand

吹针上：吹针上动作时，应在模具开模状态下，以免未对准模具吹针损坏模具

Blowing needle up: when blowing needle up action ,it should be in the mold opening state,so as to avoid the mold blowing needle damaged

吹针下： 用于下吹针向下移动（注：如需要使用此动作应在功能选择里面打开吹针功能）

Blow needle down: it is used for blowing needle forward down move (mark: if you need to use this action ,turn on the needle blowing function in the function selection)

撑料开：用于下吹针向最大位置打开

Expand open: It is used for blowing needle open max position

撑料闭：用于下吹针向最小位置闭合（注：如需要使用此动作应在功能选择页面打开撑料功能）

Expand closed:it is used for blowing needle close to min position (Mark: if you need use this function turn on the function page open the expand function

成型吹气：用于下吹针吹气口，手动测试

Molding blow:it is used for down blowing needle blow ,testing manual

子模合：子模油缸关闭

Sub mold closed: sub mold oil cylinder closed

子模开：子模油缸开启（注：应在功能选择页面选择子模功能）

Sub open: Sub mold cylinder(Mark:it should be select the sub function in the selection page)

包封合：用于自动封口装置气缸或油缸闭

Envelop close:it is used for auto envelop system air cylinder or oil cylinder closed.

包封开：用于自动封口装置气缸或油缸开（注：如需使用此动作需要在功能选择页面内打开包封功能）

Envelop open:it is used for automatical envelop system air cylinder or oil cylinder open (Mark: if need use this action need press the selection page open the envelop function)

低压吹气：用于气路低压气源测试

Low pressure blowing:it is used for low pressure gas source test of gas circuit

抽芯/顶出进：用于液压抽芯或顶出油缸打开

Insertion core/Enjection in: it is used for hydraulic insertion core or Enjection oil cylinder open

抽芯/顶出退：用于液压抽芯或顶出油缸关闭（注：如需使用此动作需要在功能页面内打开抽芯/顶出 1 功能）

Insertion core/injection back:it is used for hydraulic insertion core or injector oil cylinder closed(Mark: if use this function ,it should be open the insertion core/injection 1 fuction)

抽芯/顶出进 2：用于液压抽芯或顶出油缸打开

Insertion core/injection in 2 : it is used for hydraulic insertion core or injection oil cylinder open

抽芯/顶出退 2：用于液压抽芯或顶出油缸关闭（注：如需使用此动作需要在功能页面内打开抽芯/顶出 2 功能）

Insertion core /injection back 2:it is used for hydraulic insertion core or injection oil cylinder closed(Mark: if need use this action should be function page open the insertion core /injection 2 function)

气抽芯/顶出：用于气动抽芯或顶出气缸动作（如需使用此功能应在功能选择页面选择气动抽芯/顶出 1 功能）

Pneumatic core pulling /injection: it is used for pneumatic core pulling or injection cylinder action(if you need to use this function ,you should select pneumatic core pulling/injection 1 function on the function selection page)

气抽芯/顶出 2：用于气动抽芯或顶出气缸动作（如需使用此功能应在功能选择页面选择气动抽芯/顶出 2 功能）

Pneumatic core pulling /injection 2: it is used for pneumatic core pulling or injection cylinder action(if you need to use this function ,you should select pneumatic core pulling/injection 2 function on the function selection page)

手动排气：一般不使用， 主要用于带有循环吹气气阀设备

Air-out: Generally not used, mainly used for equipment with circulating air blowing valve

侧吹针进：用于 3 孔单独吹气式气缸， 单独吹针进退

Side blowpin: For 3-hole single blow air cylinder, separate blow pin to in and out

机械手合：用于机械手两个夹手夹取气缸动作

Robot arm close: Used for the action of the clamping robot arm.

机械手开：用于机械手两个夹手打开气缸动作

Robot arm open: Used for the action of the open robot arm.

机械手进：用于机械手，向前进动作，放开按钮自动退出

Robot arm in: Used for robot arm move forward, release the button to exit automatically.

机械手退：用于机械手，向后退动作，放开按钮自动退出

Robot arm back: Used for robot arm move back, release the button to exit automatically.

模口开启：用于口模打开间隙使用

Die open: Used for opening the gap of the die-pin.

模口关闭：用于手动射出原材料后，点击模口关闭，切断原材料使用

Die close: Used for click it to cut down material after extrusion by manual.

机台上升：用于升高模头与模具间的距离.

Platform Up: Used for turn up the gap between the die head and mould.

机台下降：用于降低模头与模具间的距离，以免过多浪费原材料

Platform DN: Used for turn down the gap between the die head and mould, as not to waste too much raw materials.

模头前进：用于调整模头与模具中心位置调整，

DIE FORWARD: Used for adjust center place between die head the mould.

模头后退：用于调整模头与模具中心位置调整，（注：在使用模头前进与后退动作时，必须保证模头口模高于模板方可进退）

DIE BACK: Used for adjust center place between die head the mould. (Note: When using the die head to move forward and backward, you must ensure that the die head is higher than the template before it can move forward and backward)

换网上升：用于带有过滤网的设备使用，

Rosebox up: Used for equipment with filter.

换网下降：用于带有过滤网的设备使用

Rosebox down: Used for equipment with filter.

3、温度设定 temperature settle

	10	09	08	07	06	05	04	03	02	01
SW	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
SV	0	0	0	0	0	0	0	0	0	0
PV	0	0	0	0	0	0	0	0	0	0
UP DEV	0	0	0	0	0	0	0	0	0	0
DN DEV	0	0	0	0	0	0	0	0	0	0
HEAT	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
FAN						OFF	OFF	OFF	OFF	OFF

TEMP SET   USE14ZONE   PREHEAT SET   HOME

开关：用于单独温度开关

OFF/ON: Used for separate temperature switch.

设定值：单独温度设定

SV: Used for settle temperature.

实际值：检测实际温度

PV: Detect actual temperature.

上偏差：升温达到实际值后，停止升温，达到高于上偏差温度时会有高温报警，

（注：如检测温度高于上偏差温度时应注意，是否冷却风机没有工作或

检测温度的探测器损坏）

UP DEV: After the temperature rise reaches the actual value, the temperature rise will stop. When the temperature is higher than the upper deviation temperature, there will be a high temperature alarm.

下偏差：检测温度低于下偏差温度时会有低温报警（注：如检测温度低于下偏差温度时，应检查电控箱内加热接触器是否吸合、断路开关是否关闭、检测温度的探测器是否损坏）

DN DEV:　There will be a low temperature alarm when the detection temperature is lower than the lower deviation temperature (Note: If the detection temperature is lower than the lower deviation temperature, check whether the heating contactor in the electric control box is closed, whether the circuit breaker is closed, and whether the temperature detection detector is damaged）

加热：ON 正在加热 /OFF 未在加热

HEAT: ON mean heating/ OFF mean not heating.

风机：ON 风机正在运行/ OFF 风机没有运行

FAN: ON mean turn on/ OFF mean turn down.

4、时间设定 Time settle

TIME SET (TIME UNIT: 0.1S)							NEXT	HOME		
SHOOT TIME	0	0	TOTAL BLOW PRE	0	0	Submold close Pre	0	0		
DIE OPEN T	0	0	TOTAL BLOW	0	0	Side blowpin go in Pre	0	0		
DIE BLOW PRE	0	0	FIRST BLOW	0	0	Side blowpin back Pre	0	0		
DIE BLOW T	0	0	Intermision Blow	0	0	Robot arm fwd Pre	0	0		
LOW BLOW PRE	0	0	Intermision Outgas	0	0	Robot arm clamp Pre	0	0		
LOW BLOW T	0	0	Outgas Cool	0	0	Robot arm back time	0	0		
SLOW CLOSE MOLD PRE	0	0	MOLD MICRO OPEN	0	0	BLOWPIN DOWN PRE	0	0		
LOCK MOLD T	0	0	BLOWPIN MICRO DOWN	0	0	Fully AUTO Pre	0	0		

TIME SET (TIME UNIT: 0.1S)			INSERT CORE AND PUSH OUT SET	LAST	HOME		
Seal up Pre	0	0	Liquid filling	0	0		
Seal up T	0	0	Thread T	0	0		
Circle Blow T	0	0	Submold hold T	0	0		
LOCK MOLD Pre	0	0	Blowpin up 2 part pre	0	0		
DIE CLOSE Pre	0	0	SPARE1 T	0	0		

Lubricat Run T	0	S	Vacuum pump start pre	0	0
Lubricat Stop T	0	M	Vacuum pump run time	0	0

INSERT CORE AND PUSH OUT SET	(TIME UNIT: 0.1S)				LAST	HOME

Hydraulic Function	INSERT CORE FWD PRE	0	0	INSERT CORE FWD PRE	0	0	Hydraulic Function 2
	INSERT CORE T	0	0	INSERT CORE T	0	0	
CLOSE	INSERT CORE BACK PRE	0	0	INSERT CORE BACK PRE	0	0	CLOSE
	PUSH OUT PRE	0	0	PUSH OUT PRE	0	0	(SPARE)
	PUSH OUT T	0	0	PUSH OUT T	0	0	
Pneumatic Function	INSERT CORE FWD PRE	0	0	INSERT CORE FWD PRE	0	0	Pneumatic Function 2
	INSERT CORE BACK PRE	0	0	INSERT CORE BACK PRE	0	0	
CLOSE	PUSH OUT PRE	0	0	PUSH OUT PRE	0	0	CLOSE
	PUSH OUT T	0	0	PUSH OUT T	0	0	(SPARE)

Note: Do not use select close.

射料时间：如使用电阻尺式 请设定最大值

SHOOT TIME: If use a resistance ruler, set the maximum value.

模口开启时间：用于射料前模口打开的时间，

DIE OPEN T:Opening time of the die head before shoot material.

模头吹气预计：射料时预计启动，调整合适的位置设定数值

DIE BLOE PRE: It's start when the material is shooted, adjust the appropriate position setting value.

模头吹气时间：模头吹气预计结束后启动吹气时间.

DIE BLOW T: Blowing time to start after DIE BLOW PRE.

低压吹气预计：用于合模慢速时启动预计 可根据实际情况设定

LOW BLOW PRE: It can be set according to the actual situation when it is used to start when the SLOE CLOSE MOULD PRE start.

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低压吹气时间：低压吹气预计数值结束后启动，合模终止后结束

LOW BLOW T: Start after the expected value of LOW BLOW PRE ends, and end after clamping the mold.

慢速合模预计：合模到达慢速接近开关时，可使用延时合模

SLOW CLOSE MOLD PRE:When the mold clamping reaches the slow proximity switch, the delayed mold clamping can be used.

合模迫紧时间：用于合模终止后，高压锁模使用，一般设定为 3-5 秒

LOCK MOLD T: Used for high-pressure mold clamping after the end of mold clamping, generally set to 3-5 seconds

总吹气预计：合模终止后启动成型吹气，可延时成型吹气,根据实际情况设定

TOTAL BLOW PRE: After the clamping of the mold, the blowing is started, and the molding blow can be delayed, and it can be set according to the actual situation.

总吹气时间：用于成型吹气的时间，调节数值方式，根据产品实际生产情况而定，

TOTAL BLOW: The time used for forming blowing, adjusting the value method, depends on the actual production situation of the product.

首次吹气时间：合模终止后，第一次成型吹气时间（注：不可大于总吹气时间）

FIRST BLOW: After the clamping of the mold, the first molding blowing time (Note: not greater than the total blowing time)

间歇吹气时间：可设定多次成型吹气次数

Intermision Blow: The number of blowing air can be set multiple times.

间歇放气时间：可设定多次放气次数（注：间歇吹气时间+间歇放气时间=总吹气时间-首次吹气时间的整倍数，举例：如总吹气时间为 100 秒，首次吹气为 40 秒，间歇吹气时间为 15 秒，间歇放气时间为 5 秒，那么吹气的次数为三次吹气，三次放气 100=40+（15+5）*3）

Intermision Outgas: The number of deflation times can be set (Note: intermittent blowing time + intermittent deflation time = total blowing time-an integral multiple of the first blowing time, for example: if the total blowing time is 100 seconds, the first blowing is 40 Seconds, intermittent blowing time is 15 seconds, intermittent deflation time is 5 seconds, then the number of blows is three blows, three deflations 100=40+(15+5)*3)

放气冷却时间：吹气时间结束后，需要将产品内的气排出时间，根据产品型腔内空气多少设定合适值

Outgas Cool: After the blowing time is over, need to expel the air in the product for a time, and set an appropriate value according to the amount of air in the product cavity

模具微开模时间：放气结束后，可模具微微打开时间，（注：根据实际情况而设置，数值设定太大产品会拉伤现象，数值设定太小，产品将无法脱模。）

MOLD MICRO OPEN: After the stop deflation, the mold can be opened slightly, (Note: Set according to the actual situation. If the value is set too large, the product will be strained. If the value is set too small, the product will not be demold

吹针微抽时间：用于模具微开模后，吹针向下降低时间

BLOWPIN MICRO DOWN: After the mold is slightly opened, the drop time of blowing needle .

子模合预计：用于自动启动时，子模油缸延时关闭

Submold close Pre: When used for automatic start, the sub-mold cylinder is closed with delay.

侧吹针进预计：用于带有吹针气缸模具，在合模达到合模慢速接近开关时延时启动吹针进

Side blowpin go in Pre: Used for cylinder molds with blowing needles, when the clamping reaches the low speed proximity switch, the blowing needle will start to enter with a delay.

侧吹针退预计：总吹气结束后，可延时退出吹针气缸。

Side blowpin back Pre: After the total blowing is over, the blowing needle cylinder can be delayed to exit.

机械手进预计：合模终止后，可设定机械手装置延时进时间

Robot arm fwd Pre: After the mold clamping is terminated, the delay time of the robot device can be set

机械手夹预计：机械手进预计时间结束后启动夹取时间延时（注：根据实际生产情况而设定;机械手正在运行中按急停开关会紧急复位机械手状态，请注意人员安全。）

Robot arm clamping Pre: After the robot enters the estimated time, the start of the gripping time delay (Note: Set according to the actual production situation; pressing the emergency stop switch while the robot is running will reset the robot state urgently, please pay attention to the safety of the personnel.)

机械手送预计：开模终止后，机械手退出后，将机械手夹手打开延时，根据实际生产情况而定

Robot arm back time: After the mold opening is terminated, after the manipulator exits, the manipulator clamps the hand to open the delay, which is determined according to the actual production.

吹针下预计：模具微开模后，吹针可延时下降

BLOWPIN DOEN PRE: After the mold is slightly opened, the blowing needle can be delayed to drop.

全自动预计：选择多循环功能时，开模到位后，延时下一个循环

Fully AUTO Pre: When the multi-cycle function is selected, the next cycle will be delayed after mold opening is in place.

5、压力设定 Pressure apeed set page

PRESSURE SPEED SET	SET RANGE: 0-100%			PRESS	SPEED		HOME	
OPEN MOLD QUICK	0	0	CLOSE MOLD QUICK	0	0	SHOOT OUT	0	0
OPEN MOLD SLOW	0	0	CLOSE MOLD SLOW	0	0	SHOOT BACK	0	0
BLOWPIN UP	0	0	LOCK MOLD	0	0	SUBMOLD CLOSE	0	0
BLOWPIN DOWN	0	0	EXPAND	0	0	SUBMOLD OPEN	0	0
INSERT CORE	0	0	Platform UP	0	0	DIE FORWARD	0	0
PUSH OUT	0	0	Platform DOWN	0	0	DIE BACK	0	0
Robot arm	0	0	Seal up	0	0	P TEST	0	0

Note: Main pump Pressure and Speed in this setting

压力与速度设定： 压力=油泵所产生的力度

速度=电机转速 最高值为 100%

压力与速度设定，应按当前产品所需力度与速度设定，在满足产品的需求情况下，设定越低越好， 因设定低，第一省电，第二促使油泵与电机的使用寿命增长；

Pressure and Speed Setting: Pressure = Strength

Speed = Motor Speed, Maximum 100%

The pressure and speed settings should be set according to the required strength and speed of the current product. In the case of meeting the needs of the product, setting lower as better. If setting low, can saving power and promotes the Service life growth;

6、功能选择 FUNCTION SELECTION

FUNCTION	AUTO MODE:	Semi AUTO	Full AUTO		NEXT	HOME

OFF	FAN SELECT	OFF	EXPAND SELECT	ON	Parsion select
OFF	LOW TEMP Protect	OFF	Seal up select	OFF	SHOOT-Extrude
OFF	PRE CLOSE MOLD	OFF	Ordinary submold	OFF	Side blowpin select
OFF	DOWN BLOWPIN	OFF	Preside submold	OFF	Circle Blow
OFF	PIN UP 2 Part	OFF	Robot arm pneumatic	OFF	Empty Cycle
OFF	PIN DOWN 2 Part	OFF	Robot arm motor		

Language: | CHINESE | ENGLISH | Param Save

功能选择:0N=选用   OFF=不选用

Function selection: 0N = selected / OFF = not selected

半自动：半自动需要每次开模结束后都需要按启动按钮才会下一个循环

Semi AUTO: Semi-automatic, need to press the start button every time the mold is opened before the next cycle

全自动：全自动无需人工按启动按钮，开模终止后，全自动预计时间结束开启下一个循环

Full AUTO: Fully automatic without manually pressing the start button, after the mold opening is terminated, the fully automatic estimated time ends and the next cycle.

机筒风机选择：升温时必须选用机筒风机， 如在保温状态下可以关闭机筒机器。

FAN SELECT: The fan must be selected when heating up. For example, it can be turned off in the heat preservation state.

放低温选择：用于设备调试时使用，其他任何时候都选用

LOW TEMP Protect: Used for equipment debugging, select at any other time.

预合模选择：用于在合模一段时射料， 这样的好处是便于射料结束后，在时间短的情况下合模至终点

PRE CLOSE MOLD: It is used to shoot the material when the mold is closed for first time. The advantage is it cn be clamping mould to the end in a short time after the finished shoot.

下吹针选择：用于选择下吹针功能

DOWN BLOWPIN: Used to select the bottom blow-pin function.

针上二段：用于针对产品口部有严格的平面要求时使用

PIN UP 2 PART: Used when there are strict requirements on the surface of the product mouth.

针下二段：用于产品微开模接收后，吹针可以先下降一段后再下降至终点

PIN DOWN 2 PART: After the product is received by the micro-opening mold, the blowing needle can be lowered for a period of time and then lowered to the end point

撑料选择：用于将原材料向两侧撑开的功能

EXPAND SELECT: The function of spreading parison to both sides.

包封选择：用于需要自动封口的制品，选择此功能

Seal up select: For products that need to be automatically sealed, select this function.

普通子模选择：功能合模前闭合子模，微开模时退出

Ordinary subemold: Close the sub-mold before closing the mold and exit when the mold is slightly opened

压边子模选择：合模慢速延迟子模闭合，微开模时退出

Preside subemold: Clamping slow delay sub-mold closing and mold and exit when the mold is slightly opened

机械手气动：用于气缸式机械手功能

Robot arm pneumatic: Cylinder type manipulator function

机械手液压：用于液压式机械手功能

Robot arm motor: Hydraulic manipulator function

壁厚控制器选择：用于带有壁厚控制器设备使用

Parsion select: Use of equipment with wall thickness controller

射料时绞料：用于在自动射料的时候，绞料电机就启动

SHOOT-Extrude: When the material is automatically ejected, the extrusion motor starts

侧吹针选择：用于模具带有气缸吹针时使用

Side blowpin select: Used when the mold is equipped with a cylinder blowing needle

循环吹气选择：带有循环气阀与循环吹气与放气管路设备使用

Circle Blow: Use with circulating air valve and circulating air blowing and

deflation pipeline equipment

空循环选择：用于设备不射料时，查看自动运行动作时使用

Empty Cycle: When the equipment is not shooting materials, it is used when

viewing the automatic operation action

FUNCTION		Advanced	INSERT CORE AND PUSH OUT SET	LAST	HOME
ON	Open-close mold Elec.scale		OFF	Thread select	
OFF	Auto Lubrotec		OFF	UP seal up select	
OFF	Auto close mold button		OFF	Products Auto takeout check	
OFF	Main pump Freq.select		OFF	Vacuum pump select	
ON	Main pump Servo select				
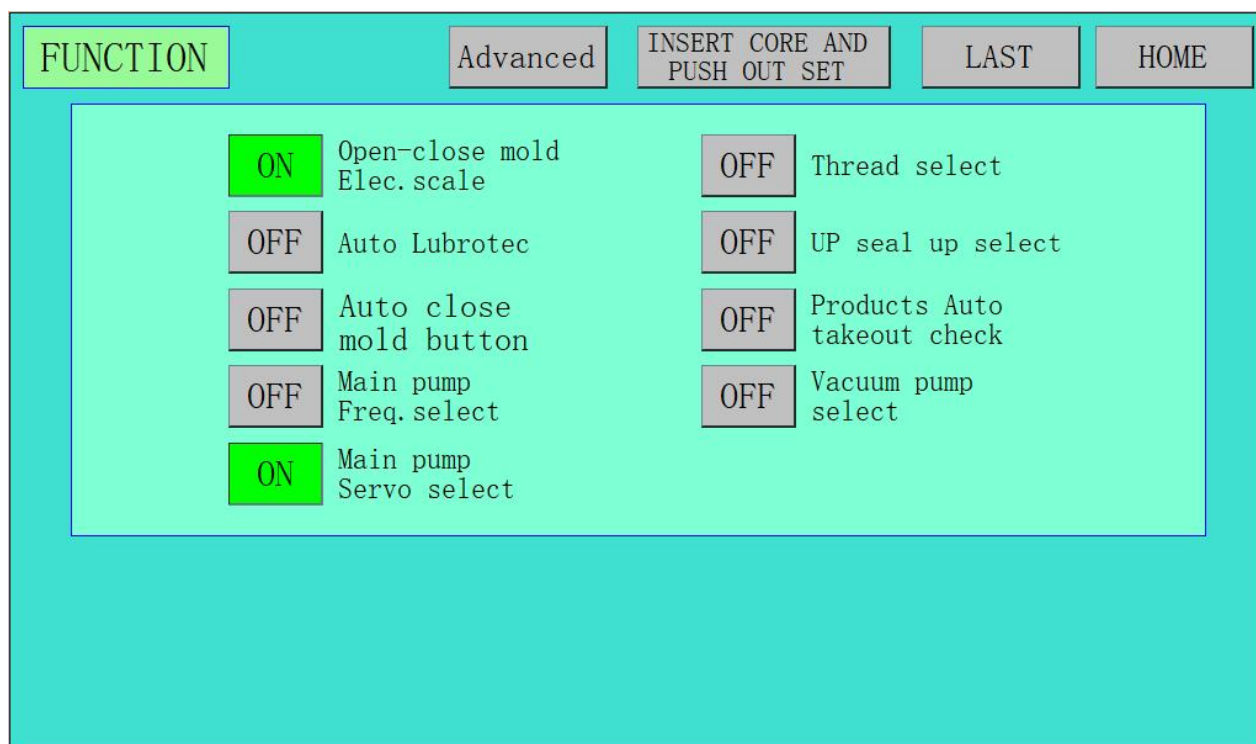
开合模电子尺：用于开合模检测带有电子尺测量时使用

Open-close mold Elec. Scale: Used for opening and closing mold detection with

electronic ruler measurement

自动润滑泵：用于带有自动润滑泵设备使用

Auto Lubrotec: Use with automatic lubrication pump equipment

自动取出检测：用于机械手取出制品，安全光幕检测到制品已出模具，时下一

循环启动，如检测不到产品已出模具下一循环自动停止

Products Auto takeout check: Used for manipulator to take out the product, the safety light curtain detects that the product has been ejected from the mold, the next cycle will start, if the product is not detected, the next cycle will automatically stop

主油泵变频：用于主油路油泵带有变频节能器设备使用

Main pump Freq. select: The main oil circuit oil pump is equipped with frequency conversion energy saving equipment.

主油泵伺服：用于主油路油泵为伺服电机时使用

Main pump Servo select:Used when the main oil circuit oil pump is a servo motor

绞牙选择：用于模具带有内螺纹产品使用

Thread select: Used for molds with internal thread products

6、输入检查 INPUT CHECK PACGE

INPUT CHECK		OUTPUT	HOME

X00 OPEN MOLD END	X10 Platform UP END	X20 EM OPEN MOLD	X30 SPARE
X01 OPEN MOLD SIOW	X11 Platform DN END	X21 BLOWPIN DN END	X31 SPARE
X02 PRE CLOSE MOLD	X12 Safety eye	X22 BLOWPIN UP1 END	X32 SUBMOLD CLOSE 1
X03 CLOSE MOLD SLOW	X13 AUTO START	X23 BLOWPIN UP END	X33 SUBMOLD CLOSE 2
X04 CLOSE MOLD END	X14 STOP	X24 Expand 1	X34 Robot arm fwd end
X05 SHOOT OUT END	X15 MAIN MOTOR FAULT	X25 Expand 2	X35 Robot arm back end
X06 Storage full end	X16 MAIN PUMP Over	X26 SUBMOLD OPEN 1	X36 SPARE
X07 Storage limit	X17 Parsion pump Over	X27 SUBMOLD OPEN 2	X37 SPARE

输入检查为 PLC 采取信号，如 PLC 采取信号不正常，那么 PLC 不会执行相关动；外部的检测装置：如接近开关、安全电眼、按钮都属于外部输入信号源。

The input check is the signal taken by the PLC. If the signal taken by the PLC is abnormal, the PLC will not perform the relevant actions; external detection devices such as proximity switches, safety sensors, and buttons are all external input signal sources.

7、输出检查 OUTPUT CHECK PAGE

OUTPUT CHECK

| INPUT | NEXT | HOME |

Y00	CLOSE MOLD FAST	Y10	DIE HEAD FWD	Y20	MAIN PUMP	Y30	TEMP3
Y01	CLOSE MOLD SLOW	Y11	DIE HEAD BACK	Y21	Differential	Y31	TEMP4
Y02	OPEN MOLD FAST	Y12	DIE HEAD BLOW	Y22	FAN1	Y32	TEMP5
Y03	OPEN MOLD SLOW	Y13	ALARM	Y23	FAN2	Y33	TEMP6
Y04	SHOOT OUT	Y14	BLOWING	Y24	FAN3	Y34	TEMP7
Y05	SHOOT BACK	Y15	Platform UP	Y25	FAN4	Y35	TEMP8
Y06	Parsion start	Y16	Platform DOWN	Y26	TEMP1	Y36	Parsion pump
Y07	DIE CLOSE	Y17	Extruder	Y27	TEMP2	Y37	LOW BLOWING

OUTPUT CHECK

| INPUT | LAST | HOME |

Y40	BLOWPIN UP	Y50	INSERT CORE/ PUSH OUT FWD	Y60	TEMP9	Y70	SPARE
Y41	BLOWPIN DOWN	Y51	INSERT CORE/ PUSH OUT BACK	Y61	TEMP10	Y71	SPARE
Y42	Expand Open	Y52	AIR-OUT	Y62	SPARE	Y72	SPARE
Y43	Expand Close	Y53	Side blowpin	Y63	SPARE	Y73	SPARE
Y44	Seal up	Y54	SPARE	Y64	Pressurize	Y74	SPARE
Y45	Robot arm fwd	Y55	Robot arm back	Y65	AIR-OUT 2	Y75	SPARE
Y46	SUBMOLD CLOSE	Y56	Robot arm close	Y66	AIR INSERT CORE/PUSH OUT	Y76	SPARE
Y47	SUBMOLD OPEN	Y57	Robot arm back	Y67	AIR INSERT CORE/PUSH OUT2	Y77	SPARE

输出检查；对应 PLC 输出信号源电线标识；用于检修设备使用

Output inspection; corresponding to the PLC output signal source wire identification; used for repairing equipment

8、自动监视 AUTO MONITOR PAGE
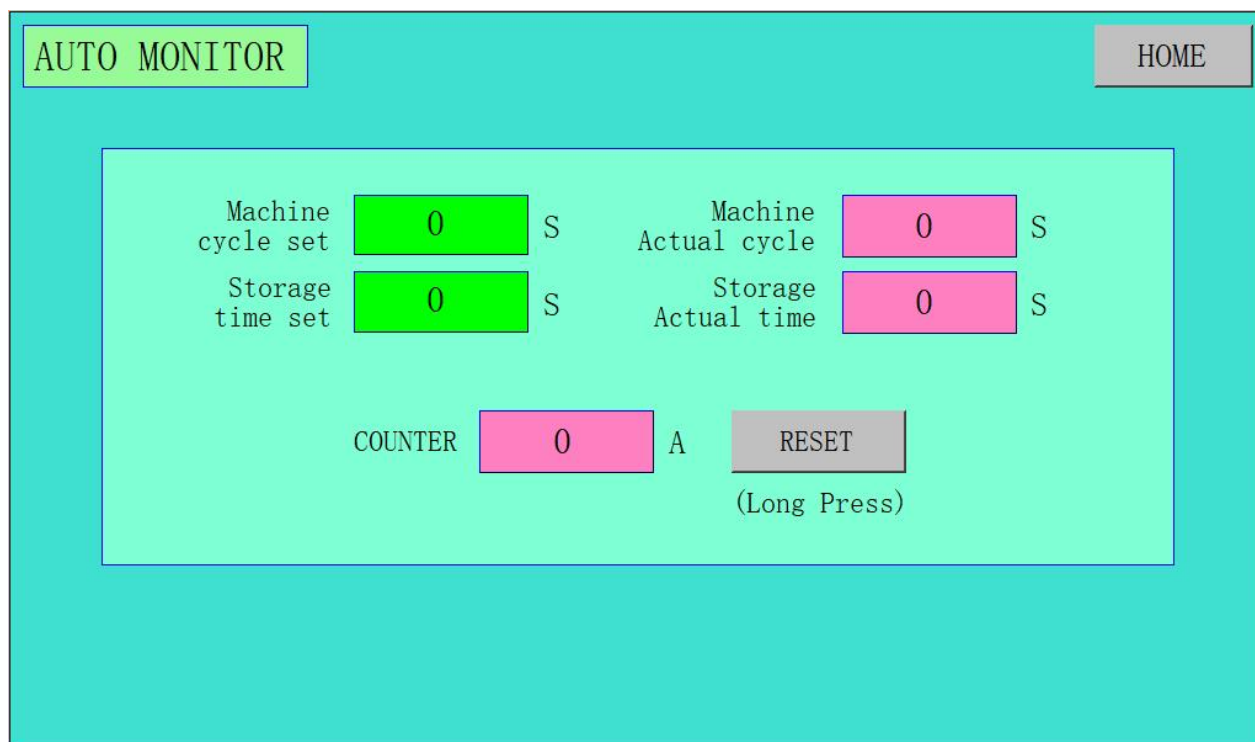
循环周期设定；自动运行时达到设定时间时，将会报警提醒；

Machine cycle set: when the set time is reached during automatic operation, an alarm will be issued;

储料时间设定：自动运行时达到设定时间，将会报警提醒；

Storage time set: when the set time is reached during automatic operation, an alarm will be issued;
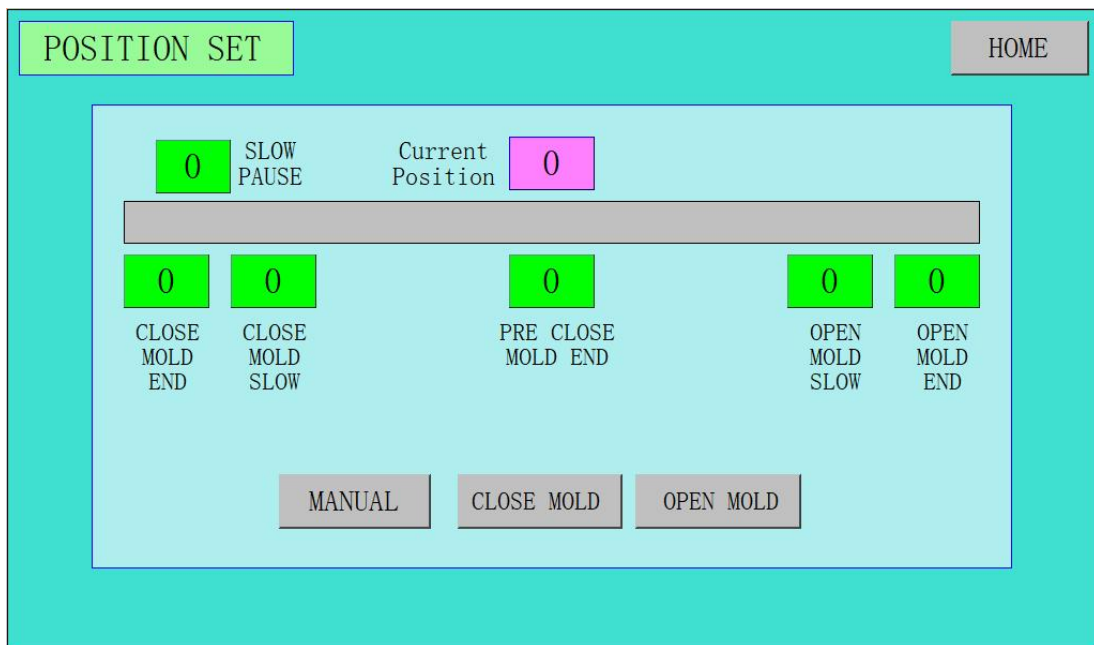
循环计数器复位按钮，需要按住 3 秒才会归零

RESET button, you need to press and hold for 3 seconds to return to zero

30

9、报警查询 ALARM CHECK PAGE
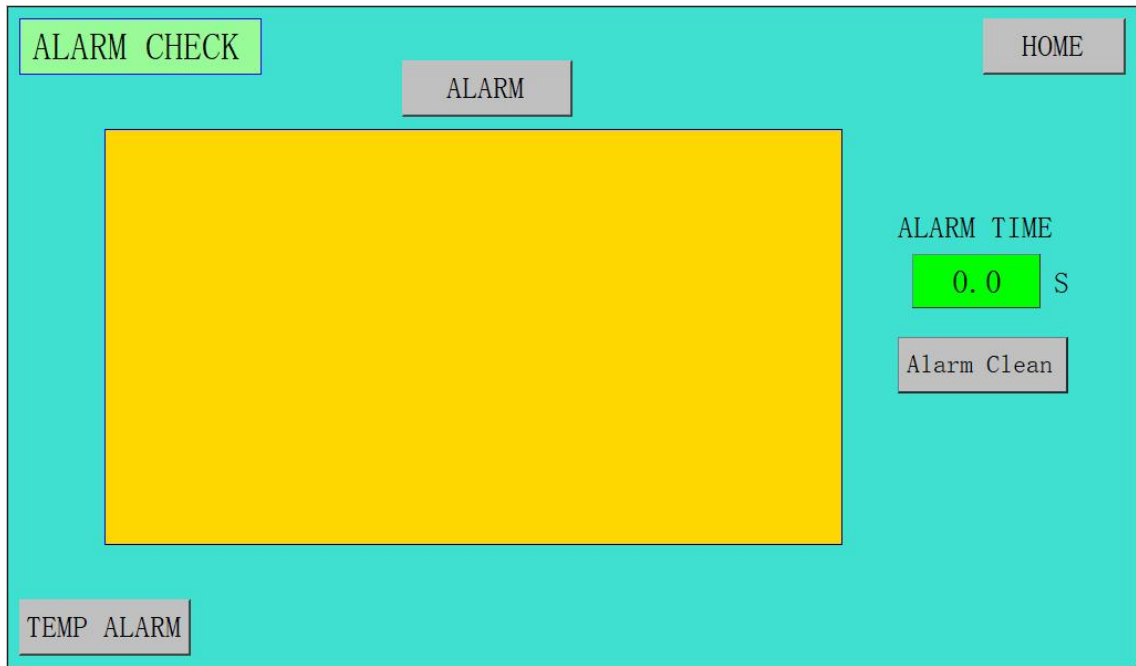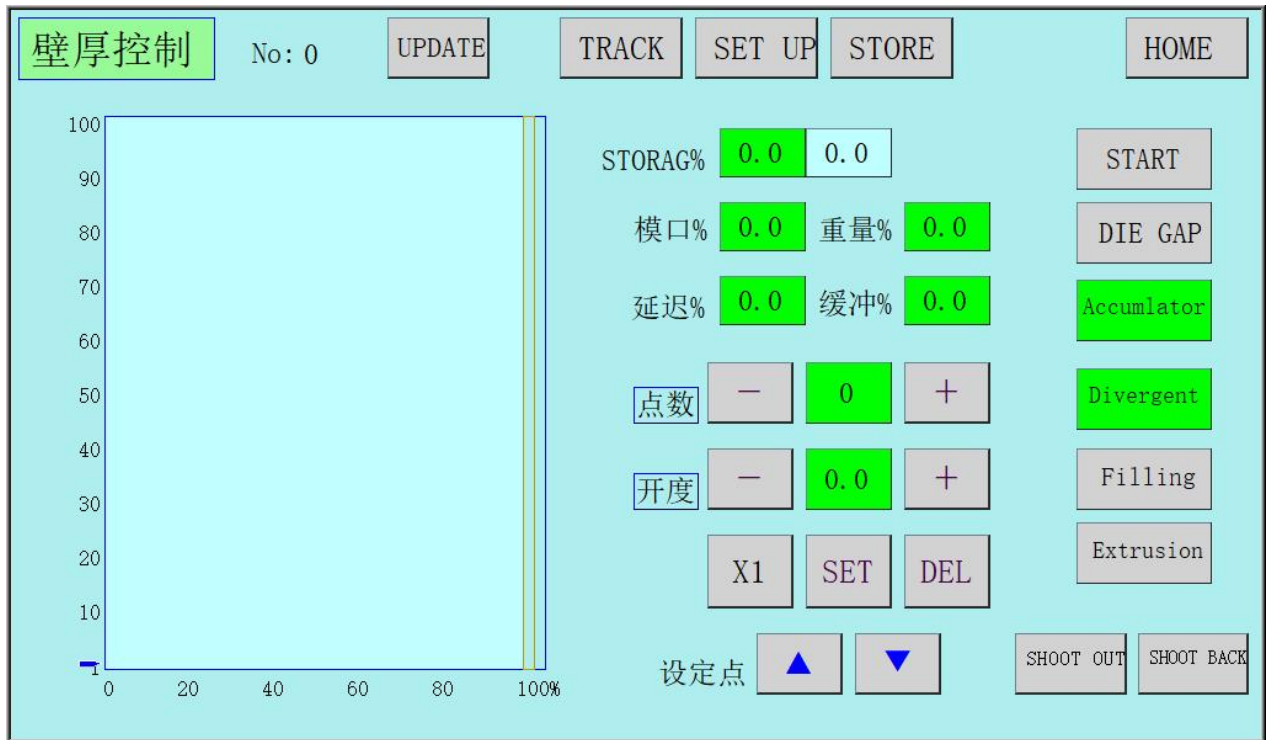

用于查询和清除报警内容，Used to view and clear alarm content

10、开合模位置 PLATEN POSITION SETTLE PAGE

用于设定开合模电阻尺行程；按照实际生产需求使用设定。

It is used to set the stroke of the resistance ruler for opening and closing the mold;

use the setting according to the actual production requirements.

11、壁厚控制 THICKNESS CONTROLLER

实际：页面切换至曲线跟踪页面

TRACK: the page switches to the curve tracking page

标识 1、快捷键，上下移动快速编辑壁厚图形

Logo 1. Shortcut keys, move up and down to quickly edit wall thickness graphics

标识 2、按住 3 秒后自动切换至设定页面

Logo 2, press and hold for 3 seconds, automatically switch to the setting page

文件：用于图形储存

STPRE: used for graphic storage

储料量%用于设定下料长短

STORAGE% used to set the length of the blanking

模口%用于自动生产时模口预留不封闭状态

模口% is used for automatic production when the die opening is reserved and not closed.

重量%用于整体壁厚加减　重量最大+20%　重量最小-10%

重量% is used for the overall wall thickness addition and subtraction Maximum weight +20% Minimum weight -10%

延迟%用于射料之前延迟打开口模

延迟% is used to delay the opening of the die before shooting

缓冲%用于设定射料终点存留原材料

缓冲% is used to set the end point of the injection to save the raw material

点数：设定壁厚曲线 1-100 点

点数: set the wall thickness curve 1-100 points

开度：设定壁厚曲线 1-100 点厚度

开度: set the thickness of the wall thickness curve to 1-100 point

X1:设定壁厚曲线倍数　X1=1 倍调节　　X10=10 倍调节

X1: set the multiple of wall thickness curve

X1=1 times adjustment **X10**=10 times adjustment

SET=设定确认键　Set Confirmation

DEL=删除已设定的曲线标记（点动）Delete the set curve mark (jog)

DEL=删除全部曲线标记　　（长按 3 秒）

　　　Delete all curve markers (long press for 3 seconds)

设定点：△ 用于快速调节壁厚 1-100 点

▽ 用于快速减轻壁厚 1-100 点

SET: △ quickly adjust the wall thickness from 1-100 points

▽ quickly reduce the wall thickness by 1-100 points

启动：模口开启信号（显示）

START: Die-pin opening signal (display)

模口：模口关闭信号（显示）

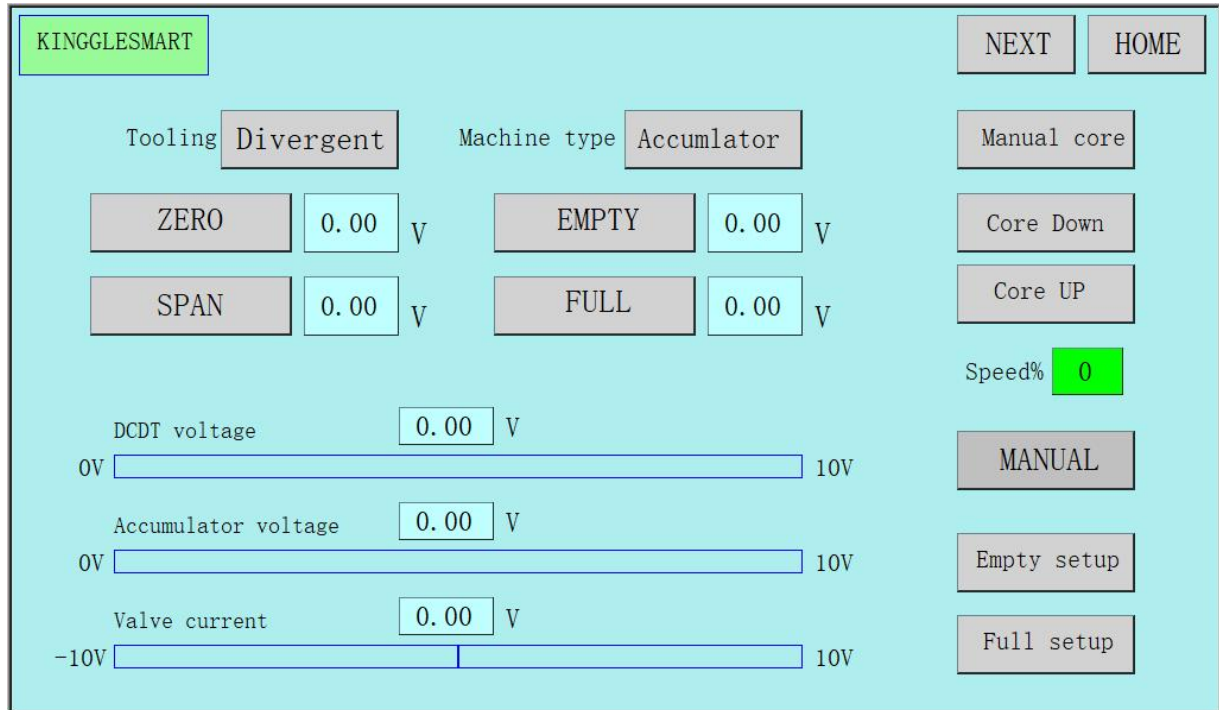**DIE GAP**: Die-pin closing signal (display)

储料式：储料缸类型;储料式/连续式

Accumulator: storage tank type; storage type/continuous square

储料满：储料到位（显示）

Filling: the storage is in place (display)

射料完：射料终点（显示）

Extrusion: end of injection (display)

| KINGGLESMART | | | | NEXT | HOME |

Tooling `Divergent` Machine type `Accumlator` Manual core

| ZERO | 0.00 V | EMPTY | 0.00 V | Core Down |
| SPAN | 0.00 V | FULL | 0.00 V | Core UP |

Speed% `0`

DCDT voltage `0.00` V
0V |_____| 10V

MANUAL

Accumulator voltage `0.00` V
0V |_____| 10V

Empty setup

Valve current `0.00` V
-10V |_____| 10V

Full setup

模口型式：选择对应的口模方式 △ 扩张型/ ▽ 收缩型

Tooling: Choose the corresponding die-pin △Expansion type /▽contraction type

储料型式：储料式=储料缸电阻式方式　连续式=储料使用行程开关控制，射料使用时间控制模式

Machine type: Accumulator = storage tank resistance type method; Continuous type = storage using stroke switch control, shooting time control mode

模口零位：当手动移芯→ 开度变小（达到外口模与内模芯配紧密配合后）　长按模口零位按钮 3 秒；

ZERO: When manually moving the core → the opening becomes smaller (after the outer die and the inner die are matched closely) Press and hold the zero button of the die mouth for 3 seconds

模口最大位：当手动移芯　开度变大（达到外口模与内模芯达到一定距离后最大开度 20mm）　长按模口最大位按钮 3 秒；

SPAN: When manually moving the core → the opening becomes larger (the maximum opening is 20mm after reaching a certain distance between the outer mold and the inner mold core) Press and hold the maximum position button of the mold for 3 seconds

储料缸空位：手动 → 射出 至到储料缸运动到最底位 长按储料缸空位 3 秒后进行设定

EMPTY:Manual → Shoot until the accumulator moves to the bottom position, press and hold the empty position of the accumulator for 3 seconds to set

储料缸满位：手动 → 射回 至到储料缸运动到最高位 长按储料缸满位 3 秒后进行设定。

FULL: Manually → shoot back until the accumulator moves to the highest position Press and hold the accumulator full position for 3 seconds to set.

壁厚缸电压：壁厚电阻尺当前实际位置

DCDT voltage: The current actual position of the wall thickness resistance ruler

储料缸电压：储料缸电阻尺当前实际位置

Accumulator voltage: The current actual position of the accumulator resistance ruler

伺服阀电压:当前伺服阀实际输出电压 -10V 至+10V（注：在为调节时电压应归 0.00V 左右）

Valve current: The actual output voltage of the current servo valve is -10V to +10V (Note: the voltage should be back to about 0.00V when adjusting)