



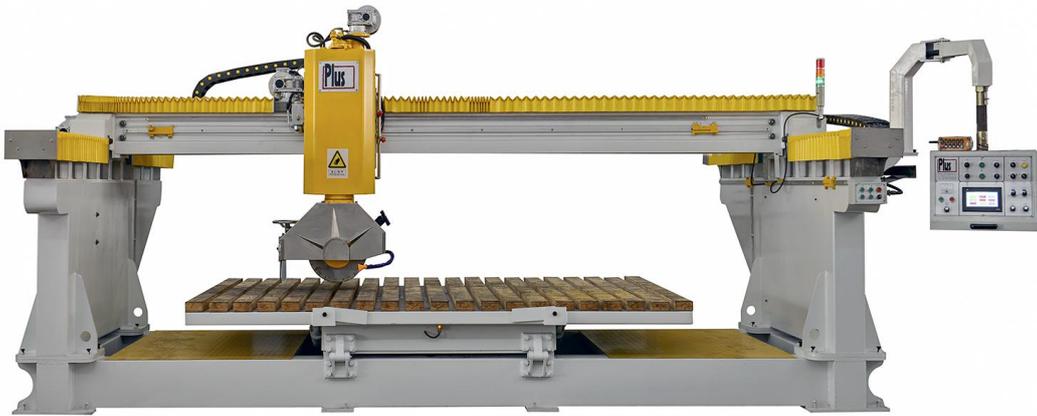
STONEPLUS MACHINERY CO., LTD.

铂锐机械有限公司

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Bridge Cutting Machine - Express

Operating Instructions





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I. Installation wiring:

Before wiring, carefully read the corresponding schematic circuit diagram and conduct the wiring in strict accordance with the diagram. No misconnection is permitted.

The control cabinet shall be kept away from heat. The installation site must be excellently ventilated and the ground surface must be dry. No water or other water-entrained matters can be splashed to the control cabinet. Effective neutral connection or protective grounding measures must be taken.

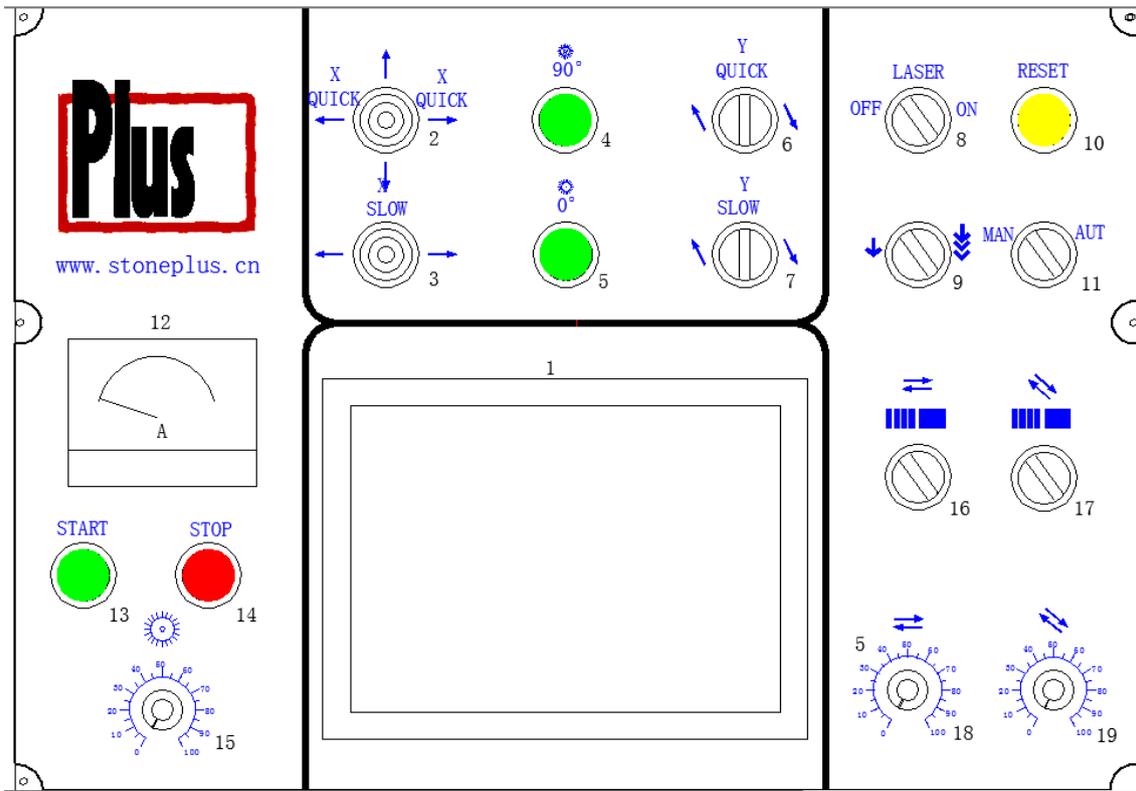
II. Operation method:

(A) Power on

Before switching on, open the cabinet door and confirm the correct connection as per the wiring diagram. After confirming the correctness, turn on the inverter power switch QF2 and control power switch QF1 in the cabinet, and close the cabinet door. Then rotate the actuator rightwards on the cabinet door to turn on the main power switch QF. Rotate the emergency stop switch rightwards on the right side of the operation box to make it bounce up and reset. Thus, this machine is powered on.



(B) Introduction to functions of the main motor operation panel



Operation Panel Figure 1

1. Touch screen: parameter setting screen;
2. Cross switch of cutting disc direction: control the upward, downward, leftward and rightward running (speed adjusted by regulator); under manual mode; press it to run the cutting disc and release it to immediately stop the cutting disc. The cutting disc cannot be operated until the table reaches the horizontal condition.
3. Leftward-or-rightward-moving low-speed two-position switch: turn it left to make the cutting disc run leftwards slowly, turn it right to make the cutting disc run rightwards slowly, press it to make the cutting disc run and release it to stop the cutting disc. The cutting disc cannot be operated until the table reaches the horizontal condition.
4. 90° rotation button: press it to make the cutter rotate clockwise to the 90° position. In this case, the cutter is vertical to the cross bridge.
5. 0° rotation button: press it to make the cutter rotate counterclockwise to the 0° position. In this case, the cutter is parallel to the cross bridge.
6. Forward-or-backward-moving high-speed selection switch: when this switch is set at the left position under manual mode, the beam will move backwards at a high speed to the backward limit; when this switch is set at the right position, the beam will move forwards at a high speed to the forward limit; when this switch is set at the middle position, the beam will stop moving. Note: the switch will operate effectively only when the table is horizontal and the beam reaches the up limit.



7. Forward-or-backward-moving low-speed selection switch: when this switch is set at the left position under manual mode, the beam will move backwards at a high speed to the rear limit; when this switch is set at the right position, the beam will move forwards at a high speed to the forward limit; when this switch is set at the middle position, the beam will stop moving. Note: the switch will operate effectively only when the table is horizontal and the beam reaches the up limit.
8. Changeover switch: power switch for infrared marker.
9. Single-layer/layered cutting selection switch: when this switch is set at the left end, single-layer cutting will be enabled; and when this switch is set at the right end, the thick slab will be cut layer by layer.
10. Reset: clearing the size and quantity settings on the parameter setting screen.
11. Manual/ automatic selector switch: it is manual mode when the switch is placed to the left end and then manual operation can be done on the operation panel and it is automatic cutting mode when the switch is placed to the right end. When the table is under horizontal condition, the cutter motor will be started. When beam reaches the up & left limits, place it under the automatic mode after completing the size and quantity settings on the parameter setting screen, to start the automatic process.
12. Ampere meter: indicating the operating current of this machine.
13. Cutter motor startup button: start the cutter motor.
14. Cutter motor stop button: press the stop button to stop the cutter motor and automatic process.
15. Speed-regulating potentiometer: adjust the cutter speed.
16. Leftward or rightward fragmenting selection switch: under automatic mode, leftward fragmenting will be enabled when the cutter is in the 90° position and this switch is set to the right and rightward fragmenting when this switch is set to the left.
17. Forward or backward fragmenting selection switch: under automatic mode, forward fragmenting will be enabled when the cutter is in the 0° position and this switch is set to the right and backward fragmenting when this switch is set to the left.
18. Leftward-and-rightward-moving speed-regulating potentiometer: adjusting the cutting speed for leftward and rightward movements.
19. Forward-and-backward-moving speed-regulating potentiometer: adjusting the cutting speed for forward and backward movements.
20. Emergency stop button (it is installed on the side face of the operation cabinet, not shown in Fig. 1): in case of emergency, press the emergency stop button on the side face of the panel cabinet, to stop all operations.



(C) Introduction to table operation panel

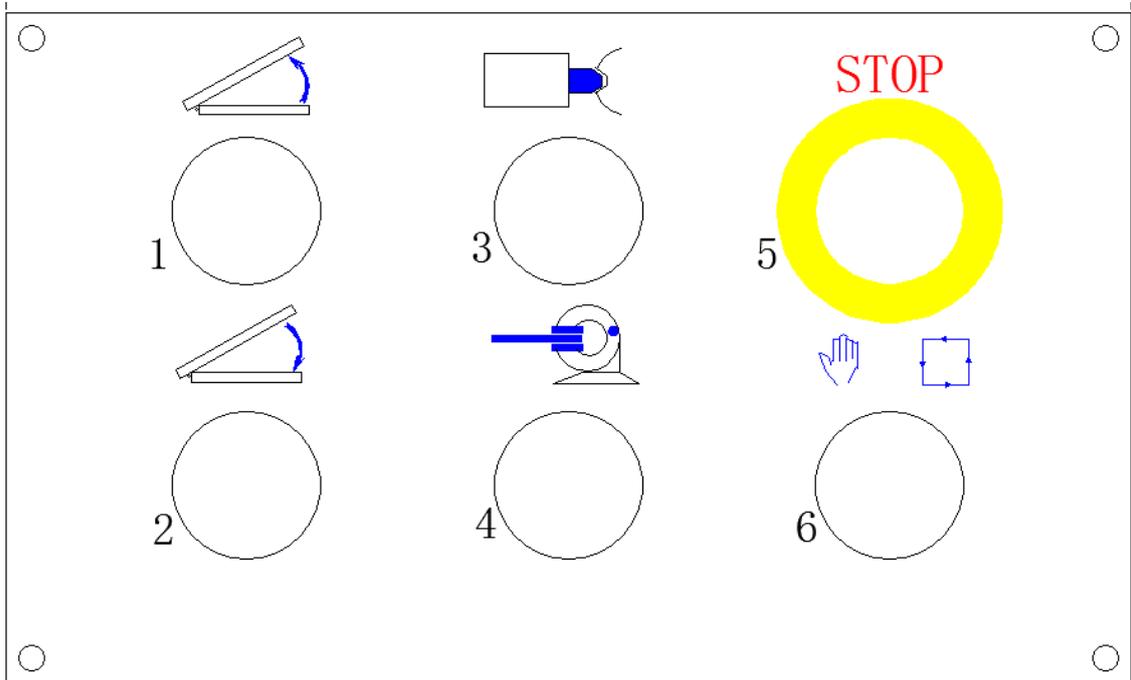


Table Operation Panel Figure II

(1) Table upturn: when beam reaches the backward limit and the cutter reaches the up limit, insert the zero positioning pin to lock the table, set the upturn time on the touch screen and press this button to make the table turn upwards. The table will stop turning upwards after the set time. In this case, press this button again to jog the table upturn. Note: if this button is pressed with the beam not at the backward limit, the beam will move backwards to the backward limit, followed by table turning.

(2) Table downturn: when beam reaches the backward limit and the cutter reaches the up limit, insert the zero-position pin to lock the table, set the downturn time on the touch screen and press this button to make the table turn downwards. The table will stop turning downwards after the set time. In this case, press this button again to repeat the above operations. Note: if this button is pressed with the beam not at the backward limit, the beam will move backwards to the backward limit, followed by table turning.

(3) Table positioning pin LOOSEN/INSERT button: set the selection switch 5 into the left manual state, slowly rotate the table by hand until the current angle is detected by the positioning detector switch. In this case, the alarm on the beam will utter the prompt sound and the red light will be ON. Press this button, the positioning pin will be inserted to lock the table, the prompt sound of the alarm will disappear, the red light will be OFF, and the green light will be ON. Before further rotating the table, press this button again, and the positioning pin will exit, the alarm will utter the prompt sound again, the green light will be OFF and the red light will be ON. When the table passes the angle detection point, the prompt sound will not be uttered until the table is rotated to next angle. If required, press this button at the this angle, and the positioning pin will be inserted to lock the table.



Otherwise, continuously rotate the table to the appropriate angle and then press this button to lock it. When the selection switch 5 is in the right automatic state, observe whether the green light of the alarm is ON. If the red light of the alarm is ON, directly rotate the table; otherwise, press this button to make the positioning pin exit. In this case, the prompt sound will be uttered, and the table should pass the current angle detection area within 8s. If the table does not pass the detection area within the specified time, the positioning pin will be inserted again to lock the table. Before further rotating the table, press this button to make the positioning pin exit. Then rotate the table to next angle detection area. In this case, the alarm will utter the prompt sound, and the positioning pin will be inserted automatically to lock the table. Note: the table must be rotated slowly in the automatic positioning state; otherwise, the positioning pin will be inserted when the table reaches the detection area. In this case, the table will not be locked. The main motor must be in the manual mode, regardless of manual or automatic positioning.

(4) Pneumatic table brake release/lock button: the opposite state of this button is valid. When “Release” is pressed once in the locked state, the yellow light of the alarm will be OFF. When “Lock” is pressed once and released in the released state, the yellow light of the alarm will be ON.

(5) Manual/auto table pin positioning switch: when this switch is set at the left, the table will be positioned manually; and when this switch is set at the right, the table will be positioned automatically.

(6) Hydraulic pump stop button: press this button to stop the hydraulic pump.

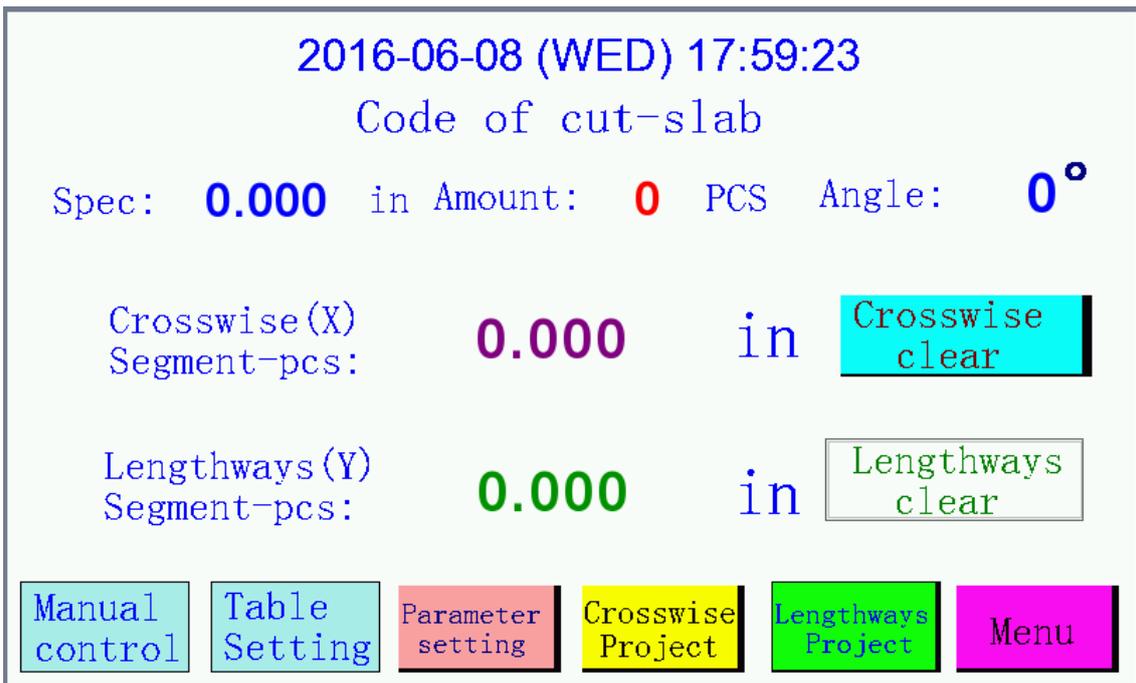
III. Touch Screen Frame and Operating Instructions.

1. Introduction to touch screen frame

Home screen after powering-on:



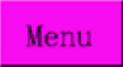
Press “ 英文
English ” to enter the cutting data display screen. Press 中文
Chinese ” to enter Chinese cutting data screen. “System number: 0” indicates the number of this machine. Detailed explanation shall be given by taking English screen for example, as below:

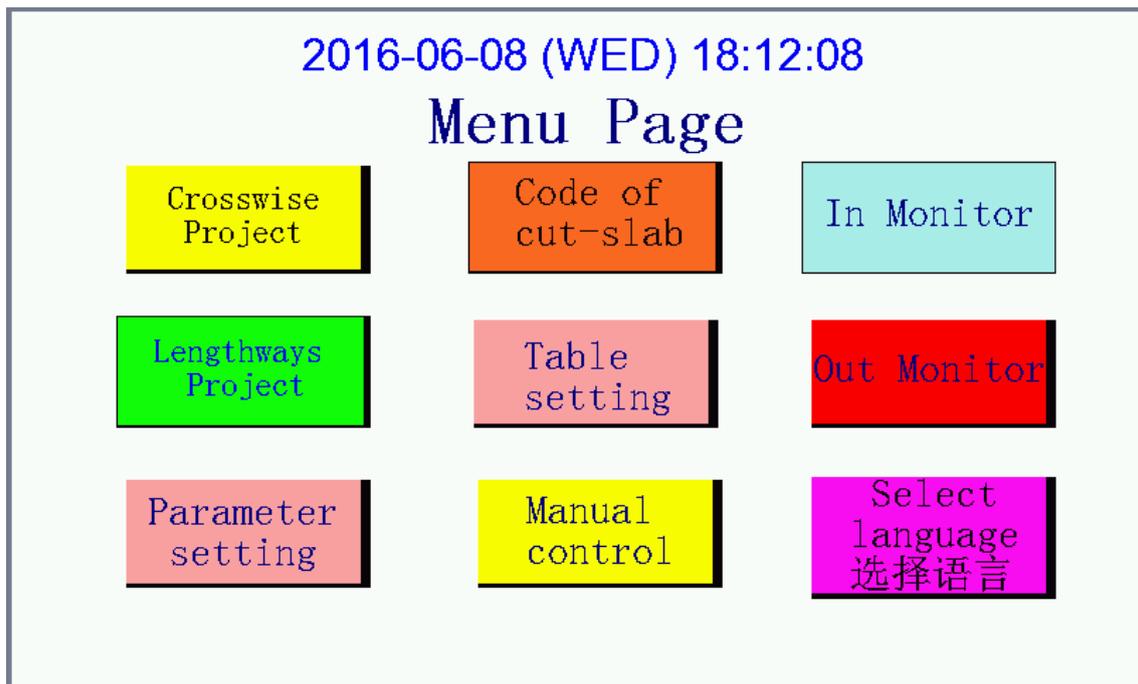




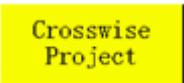
“Spec” indicates the current cutting distance; “Amount” indicating the current cutting amount; and “Table Angle” indicates the 0° or 90° position of the cutting disc. If 0°

automatic cutting is displayed, cutting will be done based on the 0° settings of “”. If 90° automatic cutting is displayed, cutting will be done based on the 90° settings of . Check whether the selected settings meet the dimensional requirements before automatic cutting.

“Crosswise(X) Segment-pcs” indicates the current distance of the cutter on X axis; ” is applied to clear X-axis data; “Lengthways(Y) Segment-pcs” indicates the current distance of the cutter on Y axis; ” is applied to clear Y-axis data; and ” is applied to enter the menu.



Enter into each page frame for setting or checking the operating state of the machine by clicking the corresponding keys on the frame.

Press “” to enter the transverse (0°) setting frame.



2016-06-08 (WED) 18:14:51

Crosswise project setting

Serial number	Size (inches)	Qty	Serial number	Size (inches)	Qty
1	0 0/0	0	5	0 0/0	0
2	0 0/0	0	6	0 0/0	0
3	0 0/0	0	7	0 0/0	0
4	0 0/0	0	8	0 0/0	0

Manual control

Table Setting

Parameter setting

Code of cut-slab

Lengthways Project

Menu



Press “” to enter the longitudinal (90°) setting frame.

2016-06-08 (WED) 18:15:54

Lengthways project setting

Serial number	Size (inches)	Qty	Serial number	Size (inches)	Qty
1	0 0/0	0	5	0 0/0	0
2	0 0/0	0	6	0 0/0	0
3	0 0/0	0	7	0 0/0	0
4	0 0/0	0	8	0 0/0	0

Manual control

Table Setting

Parameter setting

Crosswise Project

Code of cut-slab

Menu

Engineering data setting: 8 different sizes for 0° or 90° cutting can be set individually as required and each size can be provided with different quantities for automatic processing. Wrong setting may lead to the abnormality of automatic cutting or the failure to meet expected requirements of the machine. The correct method of setting: firstly know how many different sizes to be finished. If there is only one size, only columns “Size (mm)” and



“QTY” corresponding to 1# engineering data in the column “Serial Number” shall be set up; while 2-8# shall not be set and both size and quantity corresponding to those items must be 0. For convenience, columns “Size (mm)” and “QTY” corresponding to 8# engineering data in the column “Serial Number” can be set only; while 1-7# shall not be set and both size and quantity corresponding to those items must be 0. If there are two or more but less than 7 sizes, finishing parameters must be set from top to bottom or from bottom to top, without any gap in the middle, which means that there shall be no any project with the size or the quantity set as “0” in the middle and the project set as “0” shall be on the top or at the bottom, but not in the middle definitely. In the process of setting, every project shall be provided with size and quantity settings. No event that size is set but quantity is void can occur, vice versa. For unused projects, the size and quantity must be 0. It should be noted that the foresaid matters are very important and the operators must keep in mind, otherwise improper function of the machine will exist.

One correct project setting: size 10 1/2 inches, quantity 1.

2016-06-08 (WED) 18:19:28

Crosswise project setting

Serial number	Size (inches)	Qty	Serial number	Input Keypad	Qty
1	0 0/0	0	5	Max: 9999 Min: 0 0	0
2	0 0/0	0	6	1 2 3 CLR	0
3	0 0/0	0	7	4 5 6 <-	0
4	0 0/0	0	8	7 8 9 -	0
				0 . ENTER	0

Manual control

Table Setting

Parameter setting

Code of cut-slab

Lengthways Project

Menu

Click No. 1 and the data under “Size(inches)”, and the input keypad will pop up. Enter 10 and click **ENTER**. Enter the 1 as the numerator and click **ENTER**. Enter 2 as the denominator and click **ENTER**. Click the data under “Qty”, and the input keypad will pop up. Enter 1 and click **ENTER**. If the input data are wrong, click **CLR** and enter the correct data. The frame of correct setting is as follows:



2016-06-08 (WED) 18:25:27

Crosswise project setting

Serial number	Size (inches)	Qty	Serial number	Size (inches)	Qty
1	10 1/2	1	5	0 0/0	0
2	0 0/0	0	6	0 0/0	0
3	0 0/0	0	7	0 0/0	0
4	0 0/0	0	8	0 0/0	0

Manual control

Table Setting

Parameter setting

Code of cut-slab

Lengthways Project

Menu

Another frame of correct setting:

2016-06-08 (WED) 18:31:08

Crosswise project setting

Serial number	Size (inches)	Qty	Serial number	Size (inches)	Qty
1	0 0/0	0	5	0 0/0	0
2	0 0/0	0	6	0 0/0	0
3	0 0/0	0	7	0 0/0	0
4	0 0/0	0	8	10 1/2	1

Manual control

Table Setting

Parameter setting

Code of cut-slab

Lengthways Project

Menu

Example: correct setting of 6 projects: project 1#, size 10 inches, quantity 1; project 2#, size 20 inches, quantity 2; project 3#, size 30 inches, quantity 3; project 4#, size 40 inches, quantity 4; project 5#, size 50 inches, quantity 5; and project 6#, size 60 inches, quantity 6.



2016-06-08 (WED) 18:30:02

Crosswise project setting

Serial number	Size (inches)	Qty	Serial number	Size (inches)	Qty
1	10 0/0	1	5	50 0/0	5
2	20 0/0	2	6	60 0/0	6
3	30 0/0	3	7	0 0/0	0
4	40 0/0	4	8	0 0/0	0

Manual control Table Setting Parameter setting Code of cut-slab Lengthways Project Menu

Another frame of correct setting:

2016-06-08 (WED) 18:32:30

Crosswise project setting

Serial number	Size (inches)	Qty	Serial number	Size (inches)	Qty
1	0 0/0	0	5	30 0/0	3
2	0 0/0	0	6	40 0/0	4
3	10 0/0	1	7	50 0/0	5
4	20 0/0	2	8	60 0/0	6

Manual control Table Setting Parameter setting Code of cut-slab Lengthways Project Menu

Wrong setting 1#: projects are not set in sequence. No project set as 0 can appear in the middle.



2016-06-08 (WED) 18:33:31

Crosswise project setting

Serial number	Size (inches)	Qty	Serial number	Size (inches)	Qty
1	10 0/0	1	5	30 0/0	3
2	0 0/0	0	6	0 0/0	0
3	20 0/0	1	7	50 0/0	5
4	30 0/0	2	8	60 0/0	6

Manual control

Table Setting

Parameter setting

Code of cut-slab

Lengthways Project

Menu

Wrong setting 2#: the project setting shall avoid event that only size is set but quantity not.

2016-06-08 (WED) 18:34:34

Crosswise project setting

Serial number	Size (inches)	Qty	Serial number	Size (inches)	Qty
1	10 0/0	1	5	30 0/0	3
2	15 0/0	0	6	35 0/0	0
3	20 0/0	1	7	50 0/0	5
4	30 0/0	2	8	60 0/0	6

Manual control

Table Setting

Parameter setting

Code of cut-slab

Lengthways Project

Menu

Wrong setting 3#: the project setting shall avoid event that only quantity is set but size not.



2016-06-08 (WED) 18:35:20

Crosswise project setting

Serial number	Size (inches)	Qty	Serial number	Size (inches)	Qty
1	10 0/0	1	5	30 0/0	3
2	0 0/0	2	6	0 0/0	4
3	20 0/0	1	7	50 0/0	5
4	30 0/0	2	8	60 0/0	6

Manual control
Table Setting
Parameter setting
Code of cut-slab
Lengthways Project
Menu

Wrong setting 4#: quantity of the unused project is not set as 0.

2016-06-08 (WED) 18:35:58

Crosswise project setting

Serial number	Size (inches)	Qty	Serial number	Size (inches)	Qty
1	0 0/0	1	5	30 0/0	3
2	0 0/0	2	6	35 0/0	4
3	20 0/0	1	7	50 0/0	5
4	30 0/0	2	8	60 0/0	6

Manual control
Table Setting
Parameter setting
Code of cut-slab
Lengthways Project
Menu

Wrong setting 5#: size of the unused project is not set as 0.

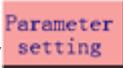


2016-06-08 (WED) 18:36:33

Crosswise project setting

Serial number	Size (inches)	Qty	Serial number	Size (inches)	Qty
1	10 0/0	0	5	30 0/0	3
2	0 0/0	0	6	35 0/0	4
3	20 0/0	1	7	50 0/0	5
4	30 0/0	2	8	60 0/0	6

Manual control Table Setting Parameter setting Code of cut-slab Lengthways Project Menu

After completing the engineering data setting, click “” to enter into the frame of parameter setting:

2016-06-08 (WED) 18:37:03

parameter setting

Blade-Width: mm

Granite time: S

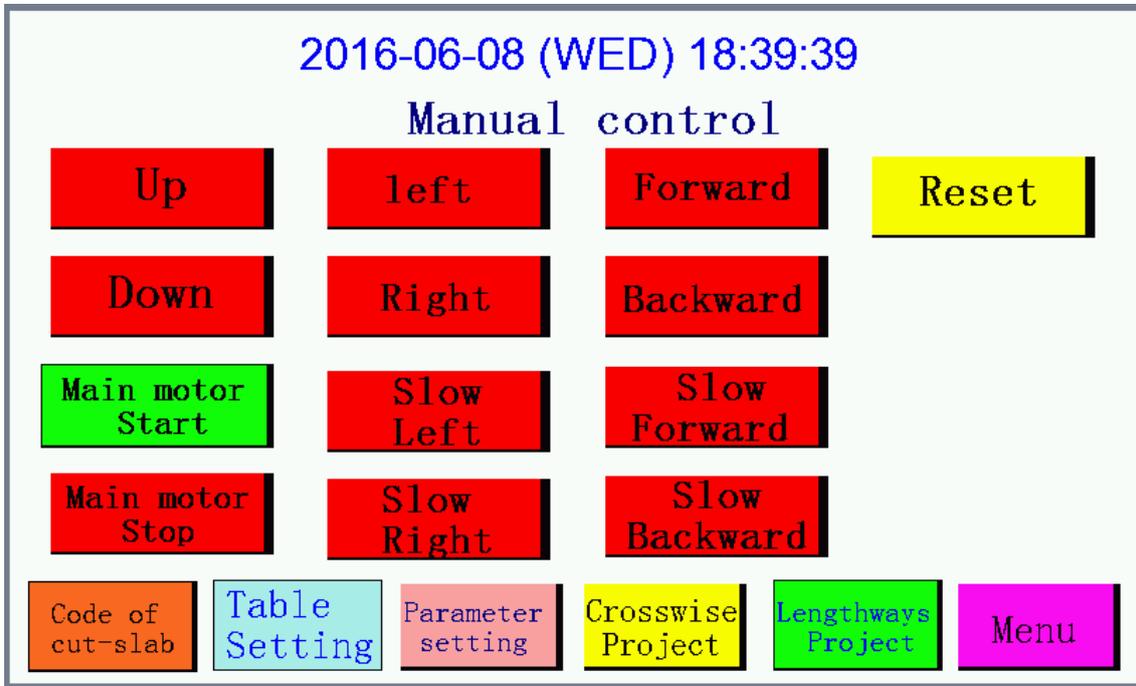
Manual control Table Setting Code of cut-slab Crosswise Project Lengthways Project Menu

“Blade-Width” means that the distance of fore-and-aft movement is deviated from the actual distance in the process of cutting. In such a case, deviation shall be adjusted through blade thickness to realize the accurate finish size. “Granite Time” means that the distance of cutting will be adjusted by time (effective under layered condition).



Manual
control

Click key “Manual control” to enter into the frame of manual control:



If any button on the operation panel is damaged or fails during operation, press corresponding buttons in this frame to replace the buttons on the operation panel, so as to

In Monitor

realize the normal operation of the machine. Click “In Monitor” in the menu frame to enter into the monitoring frame of PLC input-point status..



Menu		In state monitor		Out monitor	
00 Y axis sensor A	004 Fixed position exit/ insert	030 Man/Aut	044 Down limit		
001 Y axis sensor B	005 Brak OFF/ON	031 Front	045 Rotate level		
002 Back limit (table up/down)	006 Hydraulic stop	032 Back	046 Rotate angle		
003 X axis sensor A	007 Main motor start	033 Front slow	047 Unused		
004 X axis sensor B	008 Main motor stop	034 Back slow	048 Unused		
005 Unused	009 Cutter L. R 90°	035 Left slow	049 Unused		
006 Left limit	010 Front/Back	036 Right slow	050 Unused		
007 Right limit	011 Left/Right	037 Cutter R R 0°	051 Oil pump overload		
008 Front limit	012 Up	038 Single/More	052 UP/Down overload		
009 Back limit	013 Down	039 Reset	053 Main motor fault		
010 Table up	014 Left	040 Fixed position man/Aut	054 Left/Right fault		
011 Table down	015 Right	041 Up limit	055 Front/back fault		

By making use of this frame, real-time status of each PLC input point can be checked and causes of abnormal operation of the machine can be rapidly judged according to the status. The display in red means that there is no signal input at the point while the display in green means that there is signal input at the point. Click key “**Out monitor**” to enter into the monitoring frame of PLC output point status:

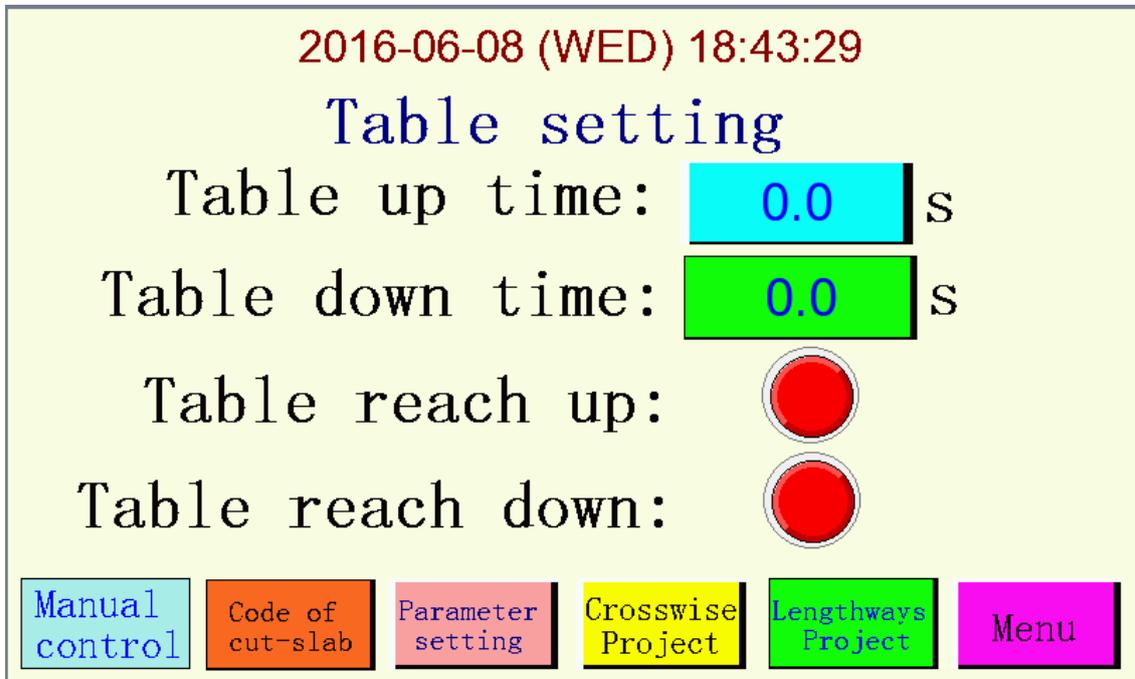
Out state monitor			
00 Forward	016 Table up	020 Fixed position exit	030 Insert indicator
001 Backward	017 Table down	021 Fixed position insert	031 Brak indicator
002 Low speed	018 Cutter L. R	022 Unused	032 Position indicator
003 Hi/Low speed	019 Cutter R. R	023 Brak OFF/ON	033 Unused
004 Left	020 Up	024 Unused	034 Unused
005 Right	021 Down	025 Oil pump	035 Unused
006 Low speed	022 Main motor start	026 Unused	036 Unused
007 Hi/Low speed	023 Unused	027 Unused	037 Unused

In monitor
Menu

By making use of this frame, real-time status of each PLC output point can be checked and causes of abnormal operation of the machine can be rapidly judged according to the status.



The display in red means that there is no signal input at the point while the display in green means that there is signal input at the point. Click “**Table Setting**” to enter the table time setting frame.



“**Table up time**” refers to the working time required by the table from “down” to “up”. If the round indicator behind “Table reach up” is red, it indicates that the table is not “up”; and if the round indicator is green, it indicates that the table is “up”. “Table down time” refers to the working time required by the table from “up” to “down”. If the round indicator behind “Table reach down” is red, it indicates that the table is not “down”; and if the round indicator is green, it indicates that the table is “down”. Press

“**Menu**” to go back to the menu frame. This machine is provided with the fault self-detection function. In case of any fault, the following frame will pop out to remind and rapidly eliminate the fault.



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Main Inverter failure!
Please check Inverter .

If the main motor inverter fails, the above frame will pop up for prompts. After troubleshooting, this frame will automatically disappear.

Oil pump motor overload
Please check oil pump
motor .

If the oil pump motor fails, the above frame will pop up for prompts. After troubleshooting, this frame will automatically disappear.



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Up/down motor overload

Please check up/down motor .

If the UP/DOWN motor fails, the above frame will pop up for prompts. After troubleshooting, this frame will automatically disappear.

Leftward/Rightward

Inverter failure!

If the Leftward/Rightward inverter fails, the above frame will pop up for prompts. After troubleshooting, this frame will automatically disappear.



**Forward/Backward
Inverter failure!**

If the Forward/Backward inverter fails, the above frame will pop up for prompts. After troubleshooting, this frame will automatically disappear.

IV. Introduction to automatic cutting process

A. Single layer: set the cutter angle to 0° or 90°, and the changeover switch 9 for cutting selection into the left single-layer state. Set the length and quantity required. Set the selection switch 16 (leftward or rightward) or 17 (forward or backward) for the fragmenting direction at the current angle into the given direction, and start the main motor. After the main motor speed increases to the rated speed (3s later), set the selection switch “11” into the automatic state to start automatic cutting. The automatic cutting (0°) process will begin and conduct as per the following sequence: starting automatic cutting - blade moving down - down limit - moving rightwards - right limit - blade moving up - up limit - moving leftwards - left limit - beam moving forwards or backwards (quantity and length exceed zero) - beam reaching the set distance – blade moving down...; upon completion of cutting as per the set quantity (or pressing downing the button of main motor stop), the operation and the main motor will be stopped. The automatic cutting (90°) process will begin and conduct as per the following sequence: starting automatic cutting - blade moving down - down limit - moving forward - forward limit - blade moving up - up limit - moving backward - backward limit - cutter moving leftwards or rightwards (quantity and length exceed zero) -cutter reaching the set distance – blade moving down...; upon completion of cutting as per the set quantity (or pressing downing the button of main motor stop), the operation and the main motor will be stopped. **Note: automatic operation can only be started when the main motor is started and the table is down. In the 0° cutting process, cutting will be stopped when the beam reaches the forward or backward limit or the manual mode is enabled;**



and in the 90° cutting process, cutting will be stopped when the cutter reaches the leftward or rightward limit or the manual mode is enabled.

B. Layered mode: determine the cutter angle and set the cutter at 0° or 90°. Turn the changeover switch 9 for cutting selection into the right layered state; set the time for blade down as the value greater than 0; and set the length and quantity required. Set the selection switch 16 (leftward or rightward) or 17 (forward or backward) for the fragmenting direction at the current angle into the given direction, and start the main motor. After the main motor speed increases to the rated speed (3s later), set the selection switch “14” into the automatic state to start automatic cutting. The automatic cutting (0°) process will begin and conduct as per the following sequence: starting automatic cutting - blade moving down - reaching “down” time - moving rightwards - right limit - “down” time - moving leftwards - left limit - down limit - moving rightwards - up limit - moving leftwards - left limit - moving forwards or backwards (quantity and length exceed zero) - beam reaching the set distance – blade moving down... The automatic cutting (90°) process will begin and conduct as per the following sequence: starting automatic cutting - blade moving down - reaching “down” time - moving forwards - forward limit - “down” time - moving backward - backward limit - down limit - moving forwards - up limit - moving backwards - backward limit - moving leftwards or rightwards for fragmenting (quantity and length exceed zero) - cutter reaching the set distance – blade moving down... Upon completion of cutting as per the set quantity (or pressing downing the button of main motor stop), the operation and the main motor will be stopped. **Note: automatic operation can only be started when the cutter is at the up limit, main motor is started and the table is down. In the 0° cutting process, cutting will be stopped when the cutter reaches the forward or backward limit or the switch is under manual mode; and in the 90° cutting process, cutting will be stopped when the cutter reaches the leftward or rightward limit or the switch is under manual mode.**

V. Considerations

- 1) Carefully read the Instruction for Use of the inverter and this Operating Instructions and earnestly understand the operation process before operating the electrical cabinet. DO NOT open the cabinet door in the process of operation, to avoid safety accidents.
- 2) DO NOT operate this control cabinet in violation of the operation requirements.
- 3) Upon discovering any event such as “abnormal operation of inverter or electric motor” during operation, immediately cut off the control power and notify relevant personnel for treatment.
- 4) Before maintenance of the control cabinet, cut off the preceding power source for this machine, turn the operating mechanism installed on the door to “OFF”, and then open the door for repairing.



VI. Failure Check and Elimination Methods

No.	Failures	Key points	Elimination methods
1	Master power switch trips	<ol style="list-style-type: none"> 1. Wire aging or peeling. 2. Short circuit 	<ol style="list-style-type: none"> 1. Replace the power wire. 2. Replace the line.
2	No power after turning on the master power switch	<ol style="list-style-type: none"> 1. Auxiliary powers switch for the inverter in the cabinet, i.e. QF2 is not turned on. 2. Control power switch in the cabinet, i.e. QF1 is not turned on. 3. Emergency stop switch is pressed down but not reset. 	<ol style="list-style-type: none"> 1. Open the door and turn on the auxiliary power switch for the inverter QF2. 2. Open the door and turn on the control power switch QF1. 3. Turn the emergency stop switch at the right side of the operation box, to release and reset.
3	Main motor cannot be started.	<ol style="list-style-type: none"> 1. The start button is damaged. 2. Main motor stop button is damaged. 3. Thermal relay protection of the main motor is activated. 	<ol style="list-style-type: none"> 1. Replace the main motor start button. 2. Replace the main motor stop button. 3. Reset the thermal relay FR1.
4	The blade cannot run up manually.	<ol style="list-style-type: none"> 1. It has reached the up limit. 2. The proximity switch of up limit is damaged. 3. Oil pressure is too low. 4. Manual/ automatic switch is placed to automatic mode. 	<ol style="list-style-type: none"> 1. Adjust the location of proximity switch of up limit. 2. Replace the proximity switch of up limit. 3. Increase the oil pressure. 4. Place the manual/ automatic switch to manual mode.
5	The blade cannot run down manually.	<ol style="list-style-type: none"> 1. It has reached the down limit. 2. The proximity switch of down limit is damaged. 3. Oil pressure is too low. 4. The table does not reach the “down” (horizontal) position. 5. Manual/ automatic switch is placed to automatic mode. 	<ol style="list-style-type: none"> 1. Adjust the location of proximity switch of down limit. 2. Replace the proximity switch of down limit. 3. Increase the oil pressure. 4. Turn the table down as specified position. 5. Place the manual/ automatic switch to manual mode.
6	The blade cannot move	<ol style="list-style-type: none"> 1. It has reached the left limit. 	<ol style="list-style-type: none"> 1. Adjust the location of proximity switch of left limit.



	leftwards manually.	<ol style="list-style-type: none"> 2. The proximity switch of left limit is damaged. 3. The table does not reach the “down” (horizontal) position. 4. Manual/ automatic switch is placed to automatic mode. 5. Leftward/ rightward inverter fails. 6. Leftward/ rightward speed regulation knob is turned to “0” position. 	<ol style="list-style-type: none"> 2. Replace the proximity switch of left limit. 3. Turn the table down as specified position. 4. Place the manual/ automatic switch to manual mode. 5. Cut off the main power source and power on 2 minutes after. 6. Turn the leftward/ rightward speed regulation knob right.
7	The blade cannot move rightwards manually.	<ol style="list-style-type: none"> 1. It has reached the right limit. 2. The proximity switch of right limit is damaged. 3. The table does not reach the “down” (horizontal) position. 4. Manual/ automatic switch is placed to automatic mode. 5. Leftward/ rightward inverter fails. 6. Leftward/ rightward speed regulation knob is turned to “0” position. 	<ol style="list-style-type: none"> 1. Adjust the location of proximity switch of right limit. 2. Replace the proximity switch of right limit. 3. Turn the table down as specified position. 4. Place the manual/ automatic switch to manual mode. 5. Cut off the main power source and power on 2 minutes after. 6. Turn the leftward/ rightward speed regulation knob right.
8	The blade cannot move forwards manually.	<ol style="list-style-type: none"> 1. It has reached the forward limit. 2. The proximity switch of forward limit is damaged. 3. The table does not reach the “down” (horizontal) position. 4. Manual/ automatic switch is placed to automatic mode. 5. Forward/ backward inverter fails. 6. The forward-or-backward-moving speed-regulating knob is in the 0 	<ol style="list-style-type: none"> 1. Adjust the location of proximity switch of forward limit. 2. Replace the proximity switch of forward limit. 3. Turn the table down as specified position. 4. Place the manual/ automatic switch to manual mode. 5. Cut off the main power source and power on 2 minutes after. 6. Rotate the forward-or-backward-moving speed-regulating knob rightwards.



		position.	
9	The blade cannot move backwards manually.	<ol style="list-style-type: none"> 1. It has reached the backward limit. 2. The proximity switch of backward limit is damaged. 3. The table does not reach the “down” (horizontal) position. 4. Manual/ automatic switch is placed to automatic mode. 5. Forward/ backward inverter fails. 6. The forward-or-backward-moving speed-regulating knob is in the 0 position. 	<ol style="list-style-type: none"> 1. Adjust the location of proximity switch of backward limit. 2. Replace the proximity switch of backward limit. 3. Turn the table down as specified position. 4. Place the manual/ automatic switch to manual mode. 5. Cut off the main power source and power on 2 minutes after. 6. Rotate the forward-or-backward-moving speed-regulating knob rightwards.
10	The table cannot turn up.	<ol style="list-style-type: none"> 1. The blade does not reach the up limit. 2. The beam does not reach the backward limit. 3. The table is not positioned, and the positioning pin is not inserted. 4. The table does not turn to 0°. 5. Turn-up time of the table is not set. 6. Manual/ automatic switch of the main motor is not placed to manual mode. 	<ol style="list-style-type: none"> 1. Move the blade up to the up limit. 2. Move the beam backwards to the backward limit. 3. Enable the table positioning detector switch and insert the positioning pin. 4. Turn the table to 0° position. 5. Set the turn-up time of table on the touch screen. 6. Place the manual/ automatic switch to manual mode.
11	The table cannot turn down.	<ol style="list-style-type: none"> 1. The blade leaves the up limit. 2. The beam leaves the backward limit. 3. The table is not positioned, and the positioning pin does not exit. 4. The table does not locate at “0°” position. 	<ol style="list-style-type: none"> 1. Move the blade up to the up limit. 2. Move the beam backwards to the backward limit. 3. Enable the table positioning detector switch and insert the positioning pin. 4. Turn the table to 0° position.



		<p>5. Turn-down time of the table is not set.</p> <p>6. Manual/ automatic switch of the main motor is not placed to manual mode.</p>	<p>5. Set the turn-down time of table on the touch screen.</p> <p>6. Place the manual/ automatic switch to manual mode.</p>
12	The table cannot be pushed manually.	<p>1. The table positioning pin does not exit.</p> <p>2. The pneumatic brake of the table is not released.</p> <p>3. The mechanical part is stuck or worn.</p>	<p>1. Press the positioning pin insert/exit button on the table operation panel to make the positioning pin exit.</p> <p>2. Press the pneumatic brake release/lock button on the table operation panel to release the brake.</p> <p>3. Repair the mechanical part to restore normal conditions.</p>
13	The table cannot be positioned.	<p>1. The table positioning detector switch is damaged.</p> <p>2. The table is manually rotated too rapidly in automatic positioning.</p>	<p>1. Check or replace the table positioning detector switch.</p> <p>2. Slowly rotate the table.</p>
14	Automatic operation fails.	<p>1. Engineering data are not set.</p> <p>2. Initial position of the blade is away from the up limit.</p> <p>3. Main motor is not started up.</p> <p>4. Manual/ automatic switch of the main motor is not placed to automatic mode.</p>	<p>1. Properly set the engineering data on the touch screen.</p> <p>2. Move the blade to up limit.</p> <p>3. Press down the main motor start button to start up the main motor.</p> <p>4. Place the manual/ automatic switch to automatic mode.</p>

VII. Grounding

- 1) Grounding wire shall be configured on the basis of technical standards for electrical appliances & equipment in strict accordance with relevant regulations for electrical installation and operation.
- 2) All metal parts of the machine shall be connected to the ground rod of the box body.
- 3) Under humid environment, all electrical appliances even low-voltage apparatus must be grounded.



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- 4) In every plant, protective grounding, each circuit and equipment grounding must be connected to the corresponding grounding system.
- 5) All grounding materials must be sufficiently firm and provided with mechanical protection.
- 6) Main ground connections shall be as short as possible. Grounding conductor must be free from tension or corrosion.

VIII. Electrical drawing: (attachment)

Note: the Company is entitled to change the content without further notice.