



WINDER
GUANGRI ELECTRONIC MACHINERY CO., LTD

GUANGRI WINDING MACHINE PLC CONTROLLER OPERATION MANUAL JGC-2015PQL



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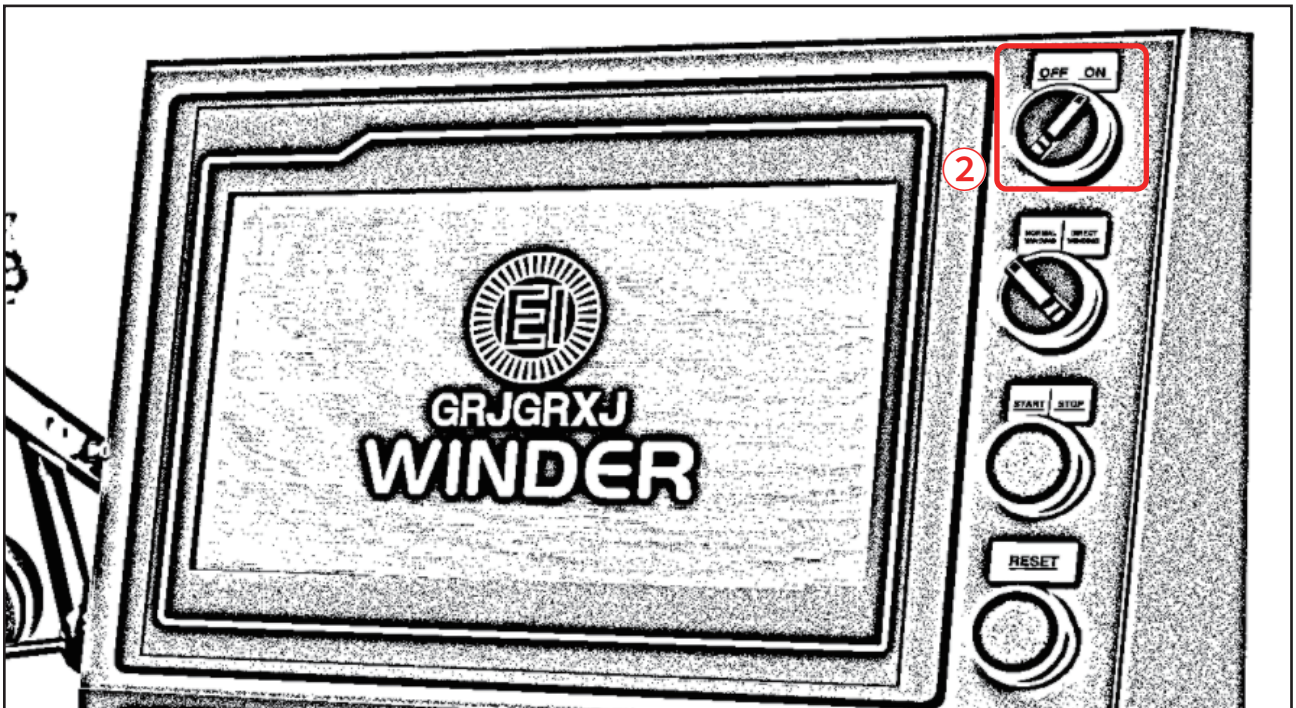
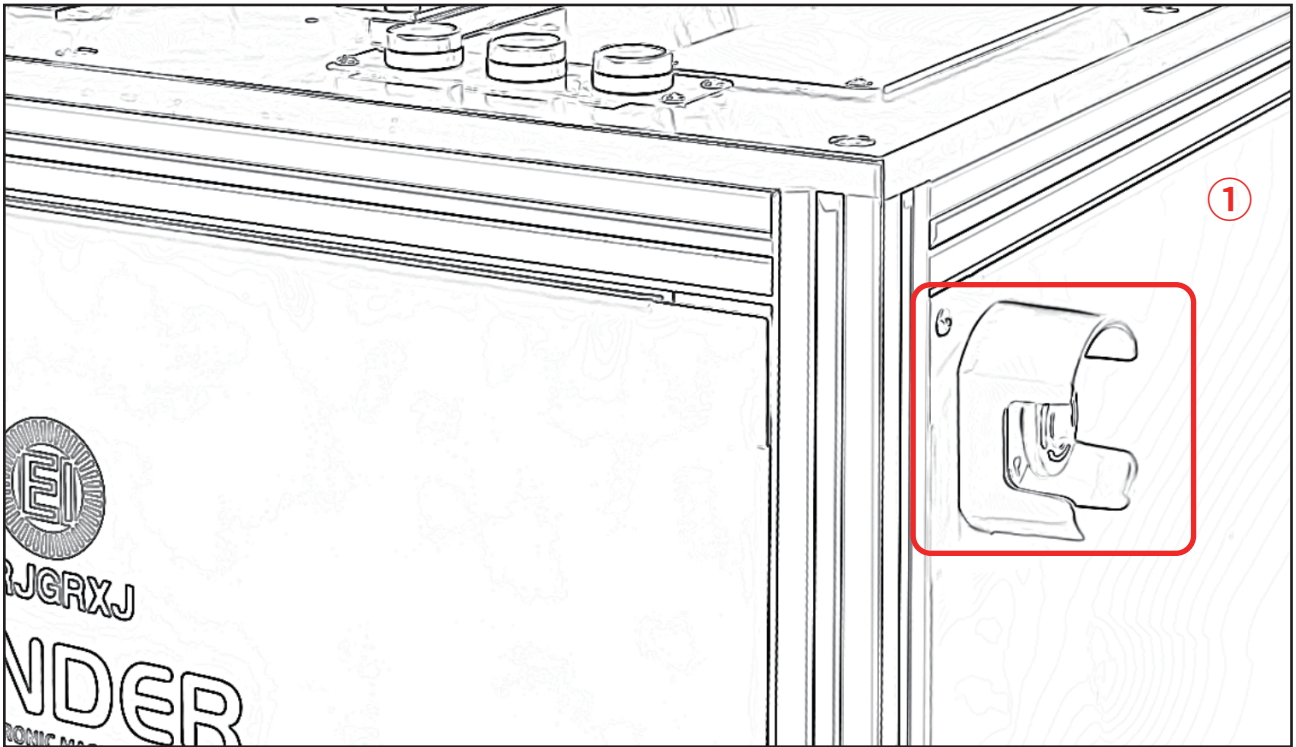


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(1) Turn on the power, release the emergency stop button①, and then press the "On" button ② located in the upper right corner of the screen.



Automatically enter the main interface after power on

Input "inner circle pitch"^①; other parameters do not need to be entered as they are for display only. (The inner circle pitch refers to the distance between each turn of the winding, such as the inner density of the wire. Then, enter the diameter of the copper wire.)

Monitoring interface				
The number of actual stored turns:	<input type="text" value="0"/>	Turns	Inner circle pitch: ^①	<input type="text" value="0"/> Millimeters
The number of turns in the wire storage:	<input type="text" value="19.7"/>	Turns	Pitch fine tuning:	<input type="text" value="0"/> Millimeters
Current output:	<input type="text" value="2"/>	Pcs	<input type="button" value="Output clearing"/>	
Total number of real wound turns:	<input type="text" value="71"/>	Turns	Winding speed:	<input type="text" value="49.9981"/> RPM
Number of real wound layer turns:	<input type="text" value="71"/>	Turns	Wire storage speed:	<input type="text" value="58.25"/> RPM
Current number of layers:	<input type="text" value="1"/>	Layers	Current layer turns:	<input type="text" value="200"/> Turns
<input type="button" value="Processing Parameter Setting"/>		<input type="button" value="Speed control pop-up window"/>		<input type="button" value="Tap turns setting"/>
				<input type="button" value="Servo enable on"/>
				<input type="button" value="Return to"/>

1. Click "Processing Parameter Setting"^② to enter the specification setting interface.

Monitoring interface				
The number of actual stored turns:	<input type="text" value="0"/>	Turns	Inner circle pitch:	<input type="text" value="0"/> Millimeters
The number of turns in the wire storage:	<input type="text" value="19.7"/>	Turns	Pitch fine tuning:	<input type="text" value="0"/> Millimeters
Current output:	<input type="text" value="2"/>	Pcs	<input type="button" value="Output clearing"/>	
Total number of real wound turns:	<input type="text" value="71"/>	Turns	Winding speed:	<input type="text" value="49.9981"/> RPM
Number of real wound layer turns:	<input type="text" value="71"/>	Turns	Wire storage speed:	<input type="text" value="58.25"/> RPM
Current number of layers:	<input type="text" value="1"/>	Layers	Current layer turns:	<input type="text" value="200"/> Turns
<input type="button" value="Processing Parameter Setting"/>		<input type="button" value="Speed control pop-up window"/>		<input type="button" value="Tap turns setting"/>
				<input type="button" value="Servo enable on"/>
				<input type="button" value="Return to"/>

2. Input the current product specifications: for the rectangular coil winding machine, provide the thickness and height^①; for the toroidal coil winding machine, specify the outer diameter and inner diameter.

Formula name		0	Specification		
Cornering speed:	2	RPM	Iron core thickness:	10	Millimeters
Total number of turns of winding:	300	Turns	Iron core height:	31	Millimeters
The number of turns in the wire storage :	19.7	Turns	Wire ring diameter:	300	Millimeters
Layer turns setting			Winding high speed:	50	RPM
			Tap speed:	10	mm/s
Return to					

3. Input the key parameter of the equipment: wire storage ring diameter (inner diameter of the storage ring)^②.

Formula name		0	Specification		
Cornering speed:	2	RPM	Iron core thickness:	10	Millimeters
Total number of turns of winding:	300	Turns	Iron core height:	31	Millimeters
The number of turns in the wire storage :	19.7	Turns	Wire ring diameter:	300	Millimeters
Layer turns setting			Winding high speed:	50	RPM
			Tap speed:	10	mm/s
Return to					

4. Click Total Turns of Winding, enter ① the number of turns of the wound product, and then click ② Storage Calculation, the system will automatically calculate ③ the number of turns of storage based on the entered values of Core Thickness, Core Height, and Ring Diameter. **[Note: There is a discrepancy between the generated value and the ideal value; you can modify the value according to actual requirements.]**

Formula name

0

Specification

Cornering speed: RPM

① Total number of turns of winding: Turns

② The number of turns in the wire storage : Turns

Layer turns setting

Iron core thickness: Millimeters

Iron core height: Millimeters

Wire ring diameter: Millimeters

Winding high speed: RPM

Tap speed: mm/s

③

Calculation of wire storage

Return to

5. After all the parameters are set, click "Specification" ④ In this section, you can save the current product specifications and the number of coils in the winding reservoir (the recipe name can be changed; please save each product with a different recipe name).

Formula name

0

④ Specification

Cornering speed: RPM

Total number of turns of winding: Turns

The number of turns in the wire storage : Turns

Layer turns setting

Iron core thickness: Millimeters

Iron core height: Millimeters

Wire ring diameter: Millimeters

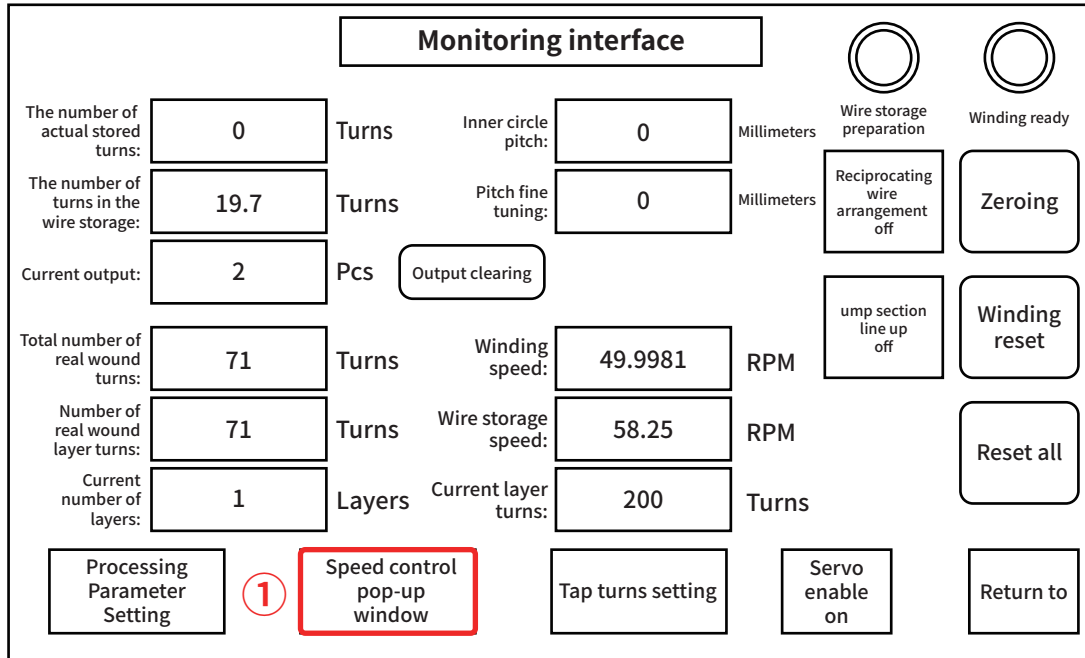
Winding high speed: RPM

Tap speed: mm/s

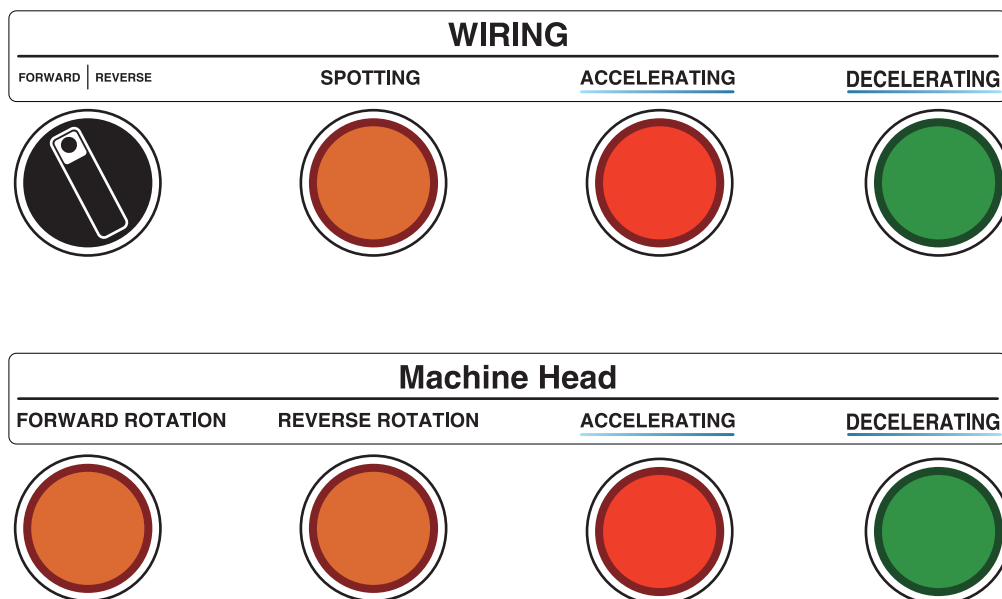
Calculation of wire storage

Return to

8.To set the speed in the winding process, we typically use the head speed and the wire arrangement speed. The speed of our equipment is adjusted by clicking the button to modify the speed; each click changes the adjustment size. You can also set the speed through the pop-up window①.



9.The red and green buttons at the bottom of the screen control the head speed, while the red button on the right side regulates the accelerated speed of the wire arrangement, and the green button controls the decelerated speed.



10. After completing the wire storage and winding for the current product, you must click "Reset all" ① to erase the current data for the next product (this step is essential). If there is an issue during the wire storage process and you need to re-store the wires, simply click on "Zeroing" ② to recalculate the number of coils stored. The same applies to the wire winding; you need to click "Winding reset" ③, or you can directly click "Reset All" to rewind the product.

Monitoring interface

The number of actual stored turns:	0	Turns	Inner circle pitch:	0	Millimeters	Wire storage preparation	Winding ready
The number of turns in the wire storage:	19.7	Turns	Pitch fine tuning:	0	Millimeters	Reciprocating wire arrangement off	Zeroing ②
Current output:	2	Pcs	Output clearing			ump section line up off	Winding reset ③
Total number of real wound turns:	71	Turns	Winding speed:	49.9981	RPM		Reset all ①
Number of real wound layer turns:	71	Turns	Wire storage speed:	58.25	RPM		
Current number of layers:	1	Layers	Current layer turns:	200	Turns		

Processing Parameter Setting Speed control pop-up window Tap turns setting Servo enable on Return to

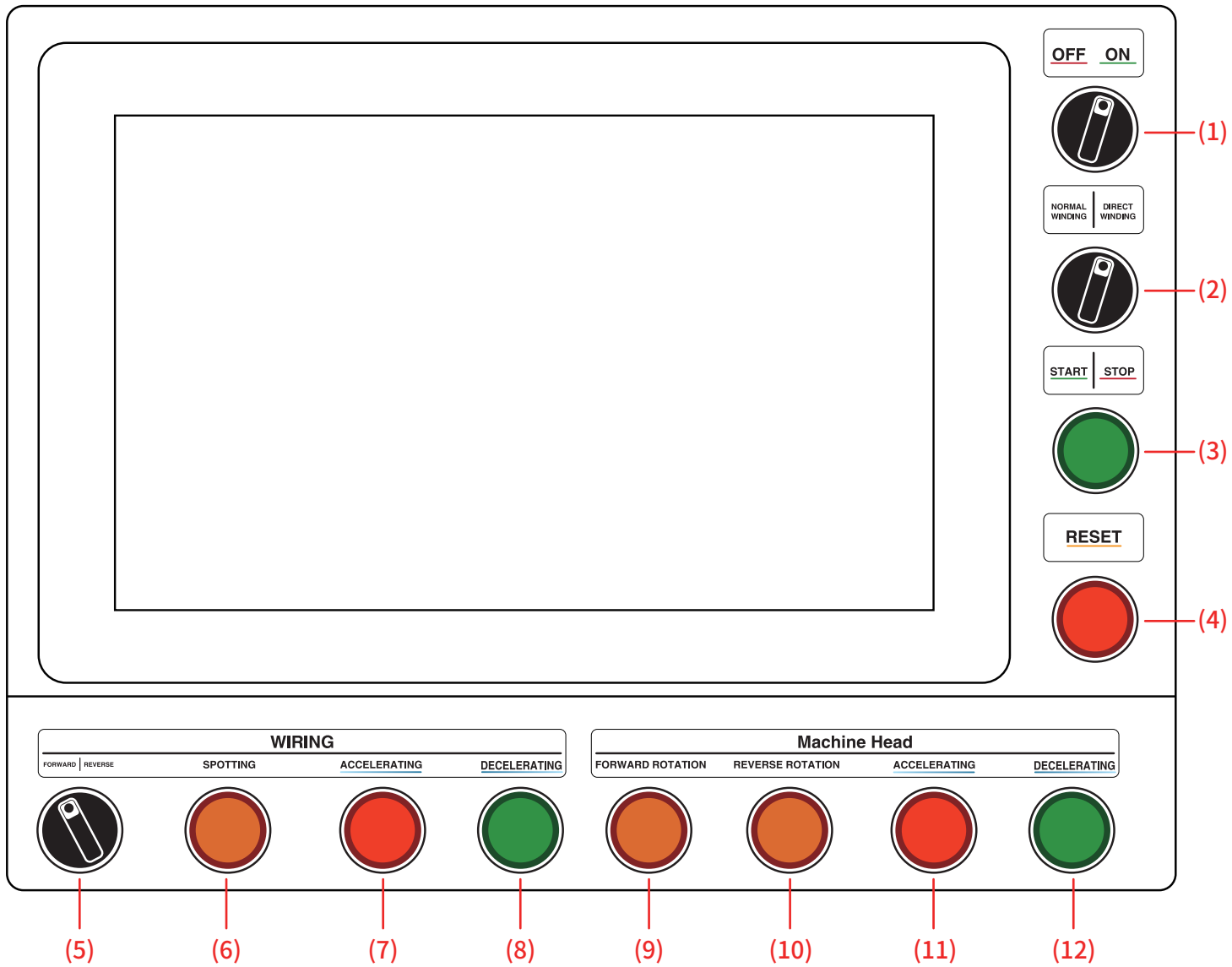
11. Whenever the "Total Turns" reaches the input turns, the "Current Output" will be updated automatically. To reset the "Current Output" and recalculate the product, press "Output Clear" ④. Pressing "Yield Clear" will reset the "Current Yield" to zero and initiate a recount.

Monitoring interface

The number of actual stored turns:	0	Turns	Inner circle pitch:	0	Millimeters	Wire storage preparation	Winding ready
The number of turns in the wire storage:	19.7	Turns	Pitch fine tuning:	0	Millimeters	Reciprocating wire arrangement off	Zeroing
Current output:	2	Pcs	Output clearing ④			ump section line up off	Winding reset
Total number of real wound turns:	71	Turns	Winding speed:	49.9981	RPM		Reset all
Number of real wound layer turns:	71	Turns	Wire storage speed:	58.25	RPM		
Current number of layers:	1	Layers	Current layer turns:	200	Turns		

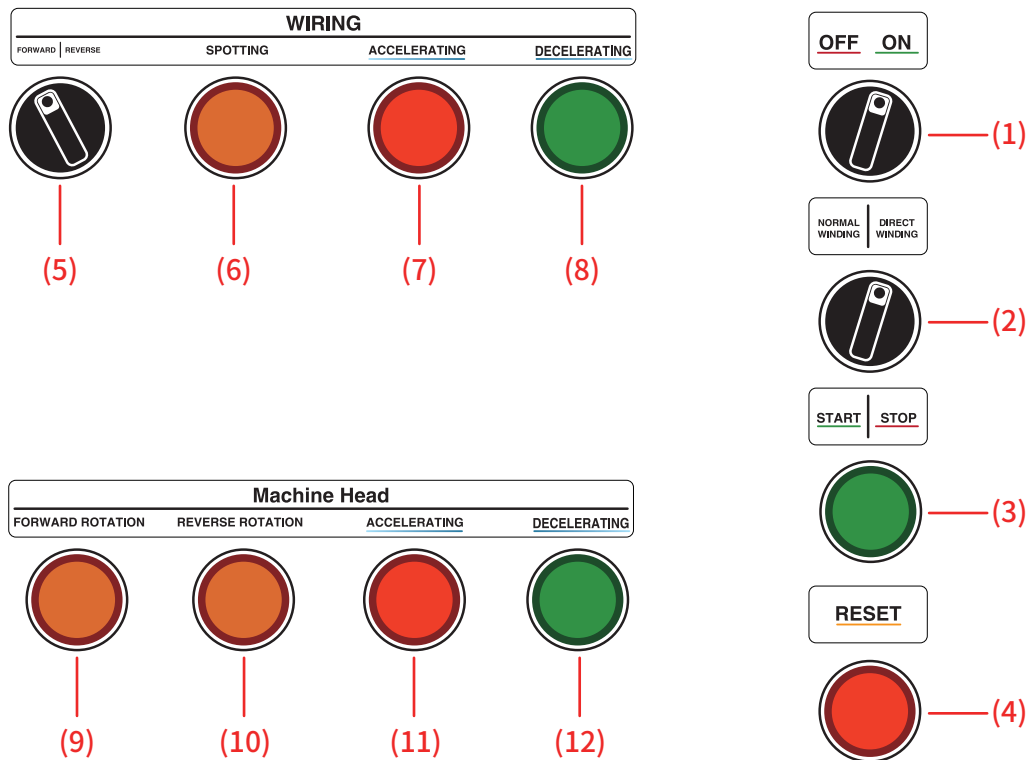
Processing Parameter Setting Speed control pop-up window Tap turns setting Servo enable on Return to

14.Buttons



- (1) Switch
- (2) Normal flow operation - direct winding
- (3) Start-stop
- (4) Reset
- (5) Direction of wiring
- (6) Tap of wiring
- (7) Acceleration of wiring
- (8) Deceleration of wiring
- (9) Head tap forward
- (10) Head tap forward and reverse
- (11) Head acceleration
- (12) Head deceleration

15. (Pushbutton Special Instructions) Normal Flow - Direct Winding

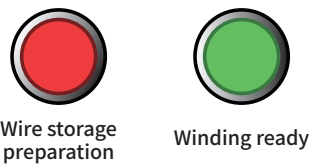


<1>The normal process follows the wire storage parameters entered on the screen. Click the start/stop button(3)— the head will begin wire storage (during this process, you can use the button (7) (8) to accelerate or decelerate)—once the value of the stored wire reaches the set value, click the start/stop button(3) again—the head will switch to winding mode.

(During the winding process, both the wire and the machine head can be speed-controlled using acceleration and deceleration (7) (8).)

In the winding operation, pressing the row of wire pointing button (6) will temporarily stop the machine head, while the row of wire will continue to run. This function is primarily used for handling rectangular core corners and will resume upon release.

<2> Direct winding—this will skip the wire storage process during the initialization of work. Press the start/stop button(3), and it will directly enter winding mode.



<3> There are 2 icons in the upper right corner of the screen indicating readiness for wire storage and readiness for winding. These two icons indicate that the head is in a working state after the start/stop button (3) has been pressed.