

# IE-CS03 Wire Cutting & Stripping Machine Operator Manual

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V2.0



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## A. Safety Regulations

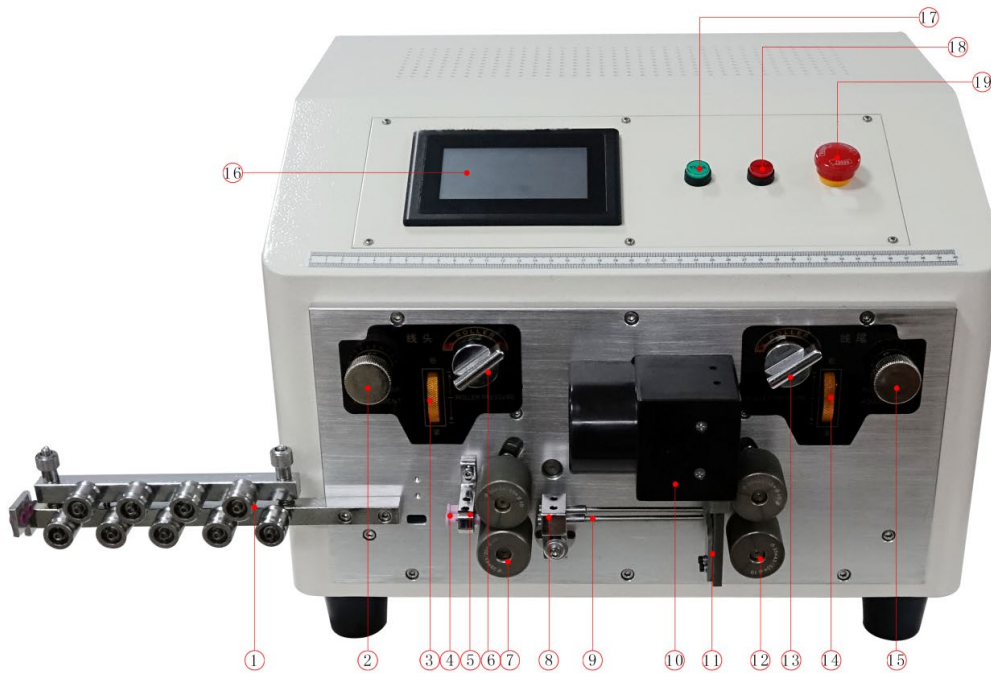
Thank you for purchasing IE-CS03 automatic wire cutting & stripping machine. The machine operator is responsible for ensuring that every employee who uses the machine has received training in accordance with these operating instructions. We have fully considered the safety factors when designing the machine, but the operator still should read through the manual and understand the content. Special attention should be given during the whole work progress, including use, repair & maintain.

1. Reliable earth wire is required.
2. We suggest to use a voltage stabilizer.
3. Box cover and protection covers are not allowed to be unloaded during the processing. When unload the covers for maintenance, the operator have to switch off the power supply.
4. Users must use, repair, maintain this machine only after fully understanding the contents of this usage manual before using the machine.
5. Wrong operation will result in surprising trouble or shortening the service life of the product, lowering the functions.
6. Please deliver this user manual to the next proprietor, together with the machine, if this machine is transferred to other people.
7. Put this book where it can be reached at any time, in order to use it over a long period of time.

### ▼ ATTENTION

**Cut off power supply before repair & maintenance.**

# 1. Handling Components



## 1. Wire Straightener

**2. Left Roller Pressure:** Adjust pressure of 2 left rollers. 0 min, 9 max.

**3. Left Roller Knob:** Turn it up to open roller. Turn it down to close roller.

**4. Left Guide Tube:** To position wire. Wire goes through it then reach left rollers.

**5. Guide Tube Base:** To fix guide tube. Adjustable, up and down.

**6. Left Roller Lift:** Raise and fall left rollers to insert wire easily.

**7. Left Rollers:** Controlled by electric motor. Spin to move wire forward and backward. Together with cutter head to feed wire and strip right(lead) side of wire.

**8. Guide Tube Base:** See 5. Guide Tube Base.

**9. Right Guide Tube:** To position wire. Wire goes through it and get into cutter head.

- 10. Cutter Head Cover:** Keep cutter head clean.
- 11. Blades:** 1 pair includes 2 pieces, fir short one ant top and long one at bottom. Correct position is that blade edge of 2 blades reach the same center point and leave no gap.
- 12. Right Rollers:** Coordinate with cutter head to transfer wire and strip left(tail) side of wire.
- 13. Right Roller Lift:** Raise and fall left rollers to insert wire easily.
- 14. Right Roller Knob:** See **3. Left Roller Knob**
- 15. Right Roller Pressure :** See **2. Left Roller Pressure.**
- 16. Touch Screen:** Set and program process parameters.
- 17. Start Button:** The machine starts working when press it.
- 18. Stop Button:** The machine stops working when press it.
- 19. Emergency Stop Button:** The machine stops working emergently when press it.

## 2. Operation

### Program

PRO.  CS03 CUTTING & STRIPPING UPH:

Feed RV LENGTH  mm Feed FW

Tail Strip  Cut Value  Lead Strip

Window  Way Back  Window

Set Qty  Batch Qty  Current Qty  Batch Delay  INCH MODE

SETTING

STEP START STOP RESET EM-STOP

*Figure 1*

**1.1 PRO(program):** Save and invoke program. Range is 00-99.

**1.2 OPH:** Output per hour.

**1.3 Feed RV:** Control left rollers, drive wire moving backward.

**1.4 Length:** Cutting length, unit is mm.

**1.5 Feed FW:** Control right rollers, drive wire moving forward.

**1.6 Tail Strip:** Jacket cutting length at left(tail) side.

**1.7 Window (left):** Jacket pull off length at left (tail) side. Less than 1.6Tail Strip, jacket partially (half) pull out; more than 1.6Tail Strip, jacket fully pull out.

**1.8 Cut Value:** Input the conductor diameter. The number smaller, blades closer, jacket cutting deeper, vice versa. The unit is mm.

**1.9 Way Back:** After cutting jacket, the blades move backward to avoid scratching conductor. The number depends on jacket thickness, jacket thicker, set way back

number bigger, vise versa. Universal range is approx 0.5-5mm.

**1.10 Lead Strip:** Jacket cutting length at right (lead) side

**1.11 Window(right):** See **1.7 Window (left)**.

**1.12 Set Qty:** Set the target quantity. Must be bigger than 1.13 Batch Quantity.

**1.13 Batch Qty:** The quantity of per batch. Machine stops working automatically after finishing this number.

**1.14 Current Qty:** Counter, total finished products quantity.

**1.15 Batch Delay:** Machine pauses seconds automatically after finishing 1.13 Batch Quantity, then restart working automatically. If input 0, machine will not restart working automatically.

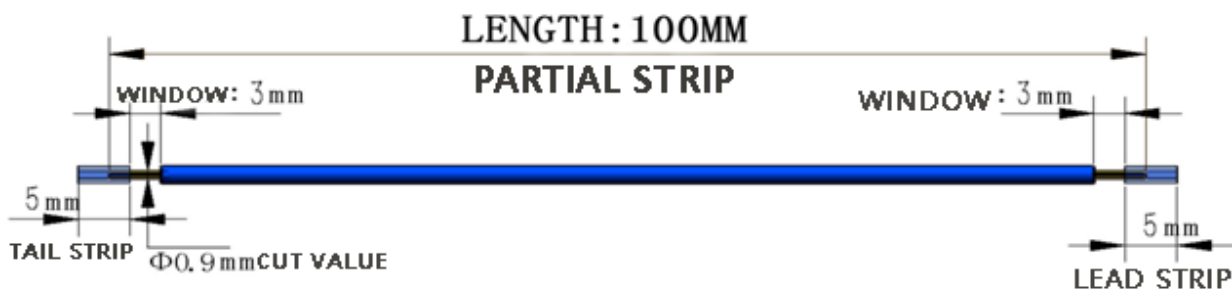
**1.16 STEP/SINGLE/Auto:** Step-machine runs step by step. Single-machine runs one cycle. Auto-machine runs constantly.

**1.17 START:** Press START after setting, the machine starts working as program.

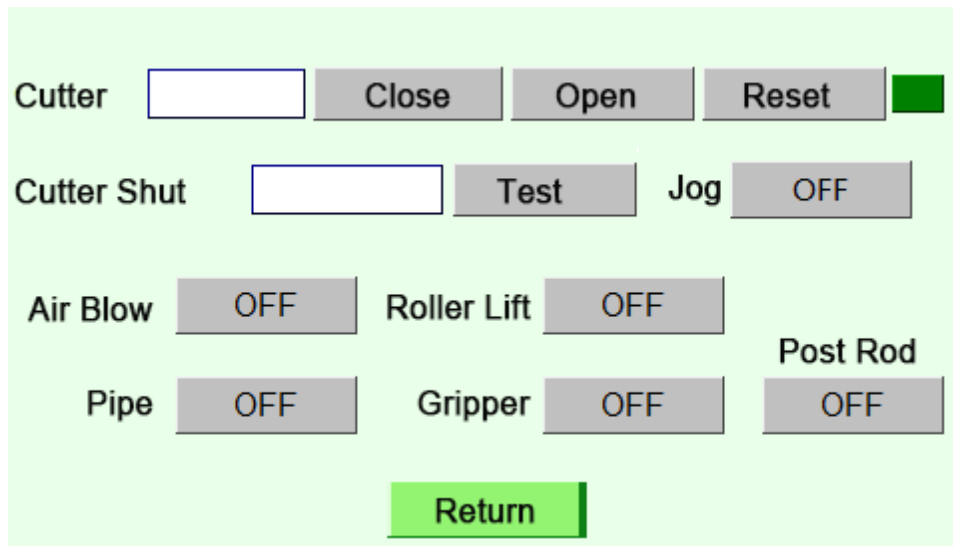
**1.18 STOP:** Press STOP, the machine stops working.

**1.19 RESET:** Press RESET to reset the machine.

**1.20 EM-STOP:** EMERGENCY STOP, the machine stops working emergently.



## INCH MODE



*Figure 2*

**2.1 Cutter:** To close/open the blades. Press Close/Open to adjust blades position. Stop repetitive adjustment until the blades just close exactly and leave no space.

**Reset:** Press to reset cutter value.

**2.2 Cutter Shut:** Input the 2.2 Cutter number..

**Test:** Press it to test if the blades close exactly.

**Jog:** To do fine adjustment of 2.2 Cutter. Unit is 0.1mm.

**NOTE:** Correct **CUTTER** setting is top important. Please confirm the blades close precisely.

**2.3 Air Blow:** Press it to rest blowing function.

**2.4 Roller Lift:** To be added.

**2.5 Pipe:** To test if pipe swings..

**2.6 Gripper:** To be added.

**2.7 Post Rod:** Optional function for long processing.



## SETTING

PIPE OFF	Roller Speed	<input type="text"/>	%	
ROLLER LIFT OFF	Cutter Speed	<input type="text"/>	%	
WIRE LACK ON	Strip Speed	<input type="text"/>	%	Mid-Strip
CUT SCRAP ON	Cut Slow Down	<input type="text"/>	%	IO Monitor
ROBOT ARM OFF	Air Blow Time	<input type="text"/>		Program
LENGTH MODIFY	Strip POS	<input type="text"/>	mm	
	Fast Mode	OFF		Return

*Figure 3*

**3.1 Roller Speed:** Wire feeding speed, min 00, max 99.

**3.2 Cutter Speed:** Blades moving speed, min 00, max99.

**3.3 Strip Speed:** Jacket pull off speed. Speed slower, pulling force bigger, vise versa.

**3.4 Cut Slow Down:** Blades slow down value when cutting wire off, min 00, max 99.

Smaller number, higher speed, smaller cut off force. Vise versa.

**3.5 Air Blow Time:** Press to set air blow time, it's to blow stripped jacket from blades.

**3.6 Strip POS:** To be added.

**3.7 Fast Mode:** To transfer out finished wire quickly.

**3.8 PIPE OFF/ON:** Guide tube swings up to avoid wire scratch when strip wire tail.

**3.9 ROLER LIFT OFF/ON:** To be added.

**3.10 WIRE LACK OFF/ON:** To monitor wire lack and sound alarm.

**3.11 CUT SCRAP OFF/ON:** To cut off jacket scrap on blade.

**3.12 ROBOT ARM OFF/ON:** Customized device for processing long wire.

## LENGTH MODIFY

Length  mm

Actual Length  mm

**CALIBRATE**

Return

*Figure 4*

**4.1 Length:** Input 1.4Length value.      **4.2 Length Actual:** Input ctual cutting length.

**4.3 CALIBRATE:** Press it, cutting length will be corrected automatically.

## Mid-Strip

### Mid-Strip **OFF/ON**

POS 01  Window  **Mid-Strip OFF**

POS 02  Window  Cut Value Modify

POS 03  Window

POS 04  Window  Length Modify

POS 05  Window

POS 06  Window

POS 07  Window  **Next**

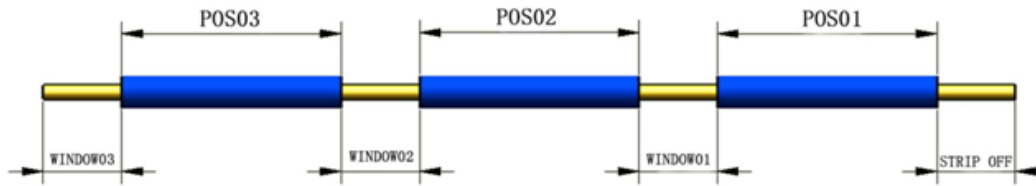
POS 08  Window  **Return**

**5.1 Pos 01:** Jacket cutting length from end to 1st middle strip;

**Window:** Jacket pulling off length of 1st middle strip.      etc.

**5.2 Cut Value Modify:** When jacket is tough, this increase cut depth to strip jacket.

**5.3 Length Modify:** When Tail full stripping failed, input it to increase pull off length.



### 3. Error Message

ERROS	SOLUTION
Lead (right) non strip	<ol style="list-style-type: none"> <li>1. Decrease wire diameter number if cutting depth is thin.</li> <li>2. Decrease gap of LEFT ROLLERS.</li> <li>3. Increase 1.11 Window (left) length.</li> </ol>
Tail (left) non strip	<ol style="list-style-type: none"> <li>1. Decrease wire diameter number if cutting depth is thin.</li> <li>2. Decrease gap of RIGHT ROLLERS.</li> <li>3. Increase 1.7 Window (left) length.</li> </ol>
Press mark on jacket	<ol style="list-style-type: none"> <li>1. Determine that it's caused by RIGHT or LEFT rollers.</li> <li>2. If by LEFT ROLLERS, increase the gap</li> <li>3. If by RIGHT ROLLERS, increase the gap.</li> </ol>
Strip rake at double sides	<ol style="list-style-type: none"> <li>1. Adjust guide tube to be closer to blades.</li> <li>2. The wire gets into cutter head with rake. By adjusting guide tube position or use smaller tube to make wire goes parallel.</li> </ol>
Conductor pulled out at double sides	<ol style="list-style-type: none"> <li>1. Pulled out by blades when strip jacket. Increase the 1.8 Cut Value</li> <li>2. Increase 1.9WAY BACK number.</li> </ol>
Conductor cut off	<ol style="list-style-type: none"> <li>1.8 Cut Value is small. Increase it and retry processing.</li> </ol>
Wire non cut off	<ol style="list-style-type: none"> <li>1. Decrease CUTTER SPEED.</li> <li>2. Blade is blunt, change new blade.</li> <li>3. BLADES are not close at parallel. Reset blades leaving tiny space.</li> </ol>
Actual cutting length doesn't match set length	<ol style="list-style-type: none"> <li>1. Something like scrap jacket in rollers. Clean it.</li> <li>2. Check wires, if wires receives resistance during feeding.</li> <li>3. Belt of LEFTROLLERS are loose, tighten it.</li> <li>4. Wire jacket is with paraffin. Clean the rollers by banana oil or gasoline.</li> </ol>
Rollers don't work	<ol style="list-style-type: none"> <li>1. Check if input 1.4LENGTH.</li> <li>2. Check if the belt is broken.</li> <li>3. Check if the roller drivers are ok ( GREEN light is yes, RED light is no )</li> </ol>
Cutter head don't work	<ol style="list-style-type: none"> <li>1. Check if cutter head driver is ok(Green light is yes, RED light is no)</li> <li>2. Check if cutter head gear is jammed or broken.</li> <li>3. Check if slide block lack lubricating oil.</li> <li>4. Check the I/O monitor. When blade return to original point, if green light is not on, the sensor is broken. Need to change sensor.</li> </ol>

START don't work	<ol style="list-style-type: none"> <li>1. Check if input OUTPUTSET number.</li> <li>2. If 1.14Current Qty number achieves 1.12Set Qty, zero 1.14Current Qty.</li> </ol>
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## 4. Tech Parameters

Function	Cut into length, full/partial/middle strip, length correction, wire lack detection.	
Conductor Cross-section	0.1-3.0 mm <sup>2</sup> x 2	0.1-6mm <sup>2</sup> x 1
Max Stripping Length	Tail Strip(Left) 30mm, Lead Strip(Right) 50mm	
Cutting Length (L)	0.1-9999mm	
Mid-Stripping No	13	
Production Rate	4000-9000 pcs/hr	
Memory Capacity	100 programs	
Air Supply	0.4-0.7MPa (clean and dry compressed air)	
Power Supply	AC220V ,50/60HZ	
Dimensions (LxWxH)	500x630x 350mm	
Weight	35kg	

## 5. Maintenance

- a) CUT OFF power supply first!
- b) Keep the workbench and machine to be clean.
- c) Clean the machine with a brush and a cloth.

- d) Add lube oil per shift.
- e) Clean scrap jacket every day.