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# Introduction

Our company is a professional manufacturer of stripping machine and with our independent intellectual property. Our brand name is SWT. We are the manufacturer and distributor of in US. We design and produce everything down to the core – software, and sensors. Based upon the advantage, we can customize features and functions easily to fit the customer's desire. At present, our factory have already passed ISO9001, ISO14001. All of our products with high quality and competitive hprice, we have a good reputation in the market. SWT Series Full-automatic Computer Wire Stripping Machine made by our factory is suitable for cutting, head-stripping, middle-stripping and tail-stripping of single -strand and multi-strand wire. The maximum processing cross-sectional area is  $8\text{mm}^2$  (AWG 8#), the maximum cutting length is 9999mm, head-stripping 80mm and tail-stripping 50mm. This machine is mainly suitable for processing wires in such

industries as electronic products, electric appliances, toys and auto and motorcycle parts, etc. With a microcomputer controlled very clean designed mechanism, it cuts and strips wire automatically. Direct and easy-to-use interface allow unexperienced users to operate it easily. Various cutting style and programmable length and distance can suit any wire assemble needed. Rapid and automatic cutting allow high boost the productivity

# Specification

Weight: 30-31KG

Overall Dimensions: 390mm×350mm×235mm

Power: 160-300W

Mode of Display: LCD Liquid Crystal Display Screen

Cutting Length: 1mm - 9999mm

Cutting Tolerance:  $\leq 0.002 \times L$  (L = Cutting Length)

Stripping Length: Head 0 - 35mm , Tail 0 - 15mm

Cutting Cross-sectional Area of Wire Core:

(SWT-508C 0.2-2.5 mm<sup>2</sup>    SWT508-SD 0.1- 4.5mm<sup>2</sup> )

(SWT-508E 0.1-8 mm<sup>2</sup>    SWT508-JE 0.1- 10mm<sup>2</sup> )

Maximum Diameter of Conduit Pipe:  $\varnothing 11$

Middle-stripping: 10 places of stripping

Material of Knife: High-quality Tungsten Steel

Stripping Speed: 3000 - 80000 p c s /h

Mode of Driving: Mode C Two-wheeled Drive

Mode SD/SDB/E/JE Four-wheeled Drive

Adjusting Speed: 0 Slowest, 9 Fastest

# Main Structure of Wire Stripping Machine

- Liquid Crystal Display Screen
- Oiling Hole
- Knife Rack Assembly
- Operating Panel
- Indicator Light of Wire Breakage
- Wire-outlet Gap Adjusting Rollers
- Wire-outlet Conveying Rollers
- Conduit Pipe Assembly
- Wire-inlet Conveying Rollers
- Wire-inlet Gap Adjusting Rollers
- Wire Inlet

**Note:** *You need to add several drops of engine oil to the oiling hole at the top of the knife rack so as to keep it well lubricated.*

## Fast Operation Method and Maintenance

1. After starting this machine, press ↑ or ↓ to move the cursor so as to choose a program. PRG:01-59 is conventional program, PRG:60-89 is middle stripping, PRG:90-99 is ultra-short wire program. (look up page 13)

(NOTE: Wire length  $\leq 40$ mm, please select short wire program (PRG:90-99), must stretch the wire-outlet rollers so as to make the upper and lower rollers not press the wire or remove the wire-outlet rollers. remove the rollers Method:demount screw under the machine then remove the wire-outlet rollers.

2. Set the stripping length (unit: mm) in the wire length.
3. Set the stripping value in the wire head, if the head-stripping value is larger than the value of wire head, it indicates full-stripping, if smaller than the value of wire head, it indicates half-stripping.
4. Set the stripping value in the wire tail, if the tail-stripping value is larger than the value of wire tail, it indicates full-stripping, if smaller than the value of wire tail, it indicates half-stripping.
5. Press the wire to be stripped in the middle of the wire-outlet rollers, adjust the wire-outlet gap adjusting rollers till the indicator light of wire breakage is out. (note: it is better that no or very low sound of internal screw rods' striking will be heard during operation). Then take the wire out and adjust the wire-inlet gap adjusting rollers so as to make the gap between the wire-inlet rollers

equivalent to the gap between the wire-outlet rollers.

6. Put the wire into the wire inlet and the wire-inlet rollers, then through the conduit pipe and the knife edge, and then move the cursor to the diameter of wire core on page 2 of the program. Press the Stop key one time, the two knives will cut the wire one time, then take out the wire again to check the cut place, if the wire covering is not fully cut, decrease the value of the diameter of wire core. If the copper wire is cut, increase the value of the diameter of wire core. Or adjust the value of the diameter of wire core according to the situation of wire stripping, if the wire or wire tail can not be stripped, you can decrease the value of the diameter of wire core, if the copper wires are completely cut off or just several pieces of copper wires are cut off, you can increase the value of the diameter of wire core.
7. Generally for the wire less than 0.5 m<sup>2</sup>, it is the best to adjust the knife retreating to the value between (RTL:)06 and 08. The thinner the wire covering is, the smaller the knife retreating is. Generally it can be set at the default value (the knife retracting default value is 08), It is suggested that the running speed of the machine should be set between 01-05.

If the wire is thicker, the speed should be adjusted to lower.

8. Press the Run key to start trial stripping. (Before wire stripping, the first wire needs to be put through the knife edge, meanwhile check the conduit pipe mouth to see whether it aligns the place about 1-2mm lower than the middle of the knife edge, so as to avoid unsmooth wire inlet. When the value of tail-stripping is more than 10, you need to move the conduit pipe a little backward so as to make the tail-stripping have the best effect).
9. The quota can be set according to the actually required quantity, the output is preset at (ATM:0000). When the output equals to the quota, the machine will stop running.
10. Press the Run key to start producing.

Note:

PRG:Program	SPD:Speed
LEN:Wire Length	AMT:Output
A-C:Wire Head	A-S:Head Stripping
B-C:Wire Tai	B-S:Tail Stripping

TOT:Quota	GRP:Qty per Bunch
DLY:Delay	M S:Middle Strippin
DIA: $\varnothing$ of Wire Core	RTL:Knife Retreating



## Points for Attention of Maintenance:

1. Please pour the engine oil into the oil hole of the knife rack regularly so as to keep it lubricated, thus lowering the noise and prolonging the service life of the machine. (Once every week is the best.)
2. Please turn off the power and remove the knife rack when replacing the knife blade, after replacement, you should align the knife blade at the minus plug-in slot of the rotational shaft of the knife rack and install it at the original position, then turn the rotational shaft of the knife rack with hand to make it rotate smoothly, and then tighten the screws on the knife rack. (Note: In order to avoid the deviation of installation position, the system will prompt the error information that the knife rack can not be reset.) If the system prompts the error information that the knife rack can not be reset, you should adjust the position of the knife edge, please read the pages 14 of the operation manual for the detailed method of adjustment of knife edge position.
3. Regularly clean the dirt on the wire-inlet rollers and the wire-outlet rollers so as to ensure the effect and quality of wire stripping. If the wires stripped are in different length,

it is possibly caused by roller slipping because of the dirt on the rollers, at this moment you need to clean it. If the fault can't be cleared after cleaning, please read the pages 19/20/21 of the operation manual for the method of Faults and Clearances.

## Operating Principle of Mechanical Part

- Operating Principle

The wire is conveyed through the wire-inlet rollers and the wire-outlet rollers and the wire cutting and stripping is finished through the knife rack assembly, which are all controlled by microcomputer technology.

- Introduction to Main Function of Every Part

1. Wire-inlet Rollers: for conveying wires and stripping wire heads.
2. Wire-outlet Rollers: for conveying wires and stripping wire tails.
3. Knife Rack Assembly: for wire cutting, head stripping and tail stripping.
4. Wire-inlet Gap Adjusting Rollers: for adjusting the wire-inlet gap, turn it down to decrease the gap and turn it up to increase the gap.

5. Wire-outlet Gap Adjusting Rollers: for adjusting the wire-outlet gap, turn it up to increase the gap and turn it down to decrease the gap.
6. Conduit Pipe Assembly: for ensuring the wire smooth and straight and preventing the wire from moving defectively when the wire moves from the wire-inlet rollers to the knife rack assembly.

- Key Points for Operation of Mechanical Parts

1. The wire is put into the wire inlet, through the wire-inlet rollers and the conduit pipe, and then onto the knife edge.
2. Wire-inlet Gap Adjusting: adjust the gap between the two rollers through the wire-inlet gap adjusting rollers to make the gap less than the outer diameter of the wire to be stripped so as to ensure normal stripping of wire covering.
3. Wire-outlet Gap Adjusting: adjust the gap between the two rollers through the wire-outlet gap adjusting rollers to make the gap less than the outer diameter of the wire to be stripped, and adjust the indicator light of wire breakage at the critical state between on and out, then turn up for half circle. If the machine still stops because the wire knobs, adjust the gap a little smaller.

## Panel Operation and Parameter Setting

1. The contents displayed on the display screen: (there are two pages in each program)

<b>PRG: 00</b>	<b>SPD: 05</b>
<b>LEN: 0080</b>	<b>AMT : 0000</b>
<b>A-C: 05.0</b>	<b>A-S: 08</b>
<b>B-C: 05.0</b>	<b>B-S: 08</b>

(Page 1 of Program)

<b>TOT: 1000</b>	<b>GRP: 0100</b>
<b>DLY: 03</b>	<b>M S: Off</b>
<b>DIA: 45</b>	<b>RTL: 08</b>

(Page 2 of Program)

2. The operation panel is shown in the following figure:

<b>PRG: 00</b>	<b>SPD: 05</b>
<b>LEN: 0080</b>	<b>AMT : 0000</b>
<b>A-C: 05.0</b>	<b>A-S: 08</b>
<b>B-C: 05.0</b>	<b>B-S: 08</b>

3. Data Setting

In the state of Stop, press ↑ or ↓ to move the position of cursor to that of the parameters to be set, then input the parameters directly through the keyboard, for 2-digit data, input two digits, for 4-digit data, input four digits, then press “ + ”, “ - ” to adjust the data directly.

Operation: First press the “Exit” key, then press ↑ or ↓ to move the position of cursor to that of the parameters to be

set, then input the data of the parameter. for 2-digit data, input two digits, for 4-digit data, input four digits, after inputting, then press ↑ or ↓ to go on moving the position of cursor to correct the parameters to be corrected till the required parameter data to be corrected, after setting, press the Run key directly or return to other program or finish setting directly. (Store the set parameters automatically).

#### 4. Data Clearing-up

Clear up the data stored in the Program 00-99 so as to make the storage contents in program 00-99, the operating procedure is: press the 0 key and the “Exit” key at the same time till the contents in the display screen disappears, after display’s contents disappearing, loosen the “Exit” key and then loosen the 0 key, after a moment it will be returned back automatically. After data clearing-up, all the originally-set data will be deleted

5. Speed Regulating Scope: 00-09, 00 is the slowest, 09 is the fastest.

#### 6. Middle Stripping

The decimal point on the keyboard at the position of “middle stripping” of each program can be turned on or off. The wire to be stripped can be middle stripped 10 places or more.

Middle Stripping in Program of (PRG:60-89) (Take 6 places of middle stripping for an example. See Figure1 )

Notes: Wire Head (A-C:05.0) means the first knife cut on the wire to be stripped, namely means the length of wire head. Middle Stripping (MS0:0005) means the last knife cut on the wire to be stripped, namely means the length of wire tail. During operation of middle stripping, you must stretch the wire-outlet rollers so as to make the upper and lower rollers not press the wire or remove the wire-outlet rollers .

<b>PRG: 60</b>	<b>SPD: 03</b>
<b>LEN: 0180</b>	<b>AMT:0000</b>
<b>A-C: 05.0</b>	<b>A-S: 08</b>
<b>B-C: 00.0</b>	<b>B-S: 00</b>

remove the rollers Method:demount screw under the machine then remove the

<b>TOT: 1000</b>	<b>GRP: 0100</b>
<b>DLY: 03</b>	<b>MS: 05</b>
<b>MS0:0005</b>	<b>MS1:0030</b>
<b>MS2:0055</b>	<b>MS3:0080</b>

<b>MS4: 0105</b>	<b>MS5: 0130</b>
<b>MS6: 0155</b>	<b>MS7: 0000</b>
<b>MS8:0000</b>	<b>MS9:0000</b>
<b>DIA:35</b>	<b>RTL:08</b>

wire-outlet rollers.

(Figure1)

7. Ultra-short wire program( Wire length $\leq$ 50mm Take a length of

30mm for an example. See figure2)

(Figure2)

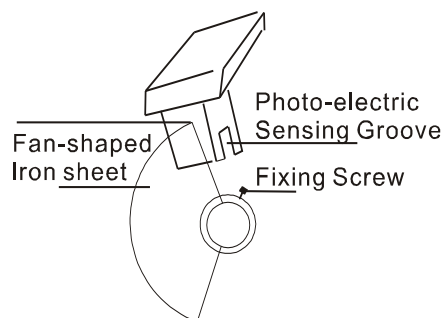
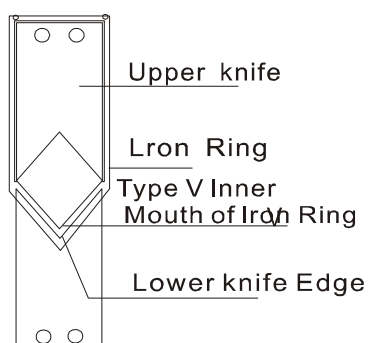
<b>PRG: 90</b>	<b>SPD: 05</b>
<b>LEN: 0030</b>	<b>AMT:0000</b>
<b>A-C: 05.0</b>	<b>A-S: 06</b>
<b>B-C: 05.0</b>	<b>B-S: 06</b>

<b>TOT: 1000</b>	<b>GRP: 0100</b>
<b>DLY: 03</b>	<b>M S: Off</b>
<b>DIA: 35</b>	<b>RTL:08</b>

## Adjustment of Knife Edge Position

1. Turn off the machine.
2. Turn the drive shaft of the knife rack to make the lower knife edge about 1 mm lower than the type V inner mouth of the iron ring. (See Figure 1)
3. Loosen the fixing screw on the drive shaft, turn the fan-shaped iron sheet to make the top point of the fan-shaped iron sheet in the middle of the photo-electric sensing groove, then tighten the fixing screw. (See figure 2)
4. Turn on the machine. (Follow the prompt, press the Esc key to execute, the machine will detect to resetting automatically.)

After this method, the values of the diameters of wire core in the program have changed, please adjust them again!

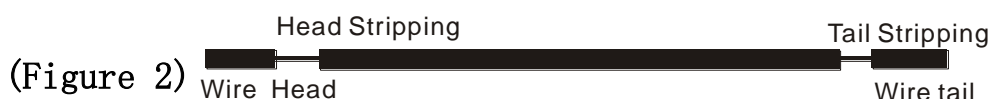


(Figure 1)

(Figure 2)

## Explanation of Parameters

1. Program: means many kinds of wires with different sizes and lengths. Store every size and length in the appointed program, program NO. (01 - 99), (PRG:60-89 Middle stripping , PRG:90-99 indicates ultra-short wires), program 00 indicates special for trial run without the function of memory. The length of ultra-short wire is limited at less than 50mm.
2. Quota: means the quantity of the wires to be stripped. After reaching the preset quota, the computer will give an alarm and stop the machine.
3. Output: Check the circumstance of production, the computer will give an alarm automatically but not stop the machine when the quantity reaches 100pcs. When the output is equal to the quota, the computer will give an alarm and stop the machine.
4. Wire Length: means the total length of the wire to be stripped, see Figure 1 and Figure 2 (including the length of wire head, the length of wire tail).



5. Wire Head: means the length of the first segment of the wire to be stripped, see Figure 1 and Figure 2.



6. Wire Tail: means the length of the last segment of the wire to be stripped, see Figure 1 and Figure 2.

7. Head Stripping: means the length of the first segment of the wire to be stripped, see Figure 2, if the head stripping is  $\geq$  the wire head, it indicates full-stripping, but if the head stripping  $<$  the wire head, it indicates half-stripping. The stripped wire covering must cover the wire head so as to prevent the wire cores from messing up during every working procedure.

8. Tail Stripping: means the length of the last segment of the wire to be stripped, see Figure 2, if the tail stripping is  $\geq$  the wire tail, it indicates full-stripping, but if the tail stripping  $<$  the wire tail, it indicates half-stripping. The stripped wire covering must cover the wire head so as to prevent the wire cores from messing up during every working procedure.

9.  $\varnothing$  of Wire Core: means the diameter of the wire core; the displayed data indicate the value of the thickness of wire, (but not the diameter of the wire core). During operation of the machine, if the wire head can't be stripped, the value of the diameter of the wire core should be adjusted to make it smaller, if the wire head can be stripped but several wire cores are cut off, the value of the diameter of the wire core

should be adjusted to make it bigger. (18-60 in general, this value is only for reference.)

10. Speed: the running speed of the machine can be divided into the grades from 00 to 09, and it can be adjusted by + or - operation. 00 is the slowest and 09 is the fastest.

11. Quantity per Bunch:5 means the quantity of the wires per bunch, in general one bunch includes 100 pcs of wires, most people have got used to this kind of calculation.

12. Delay: the machine will stop automatically for the processor to have time to tidy them up when the quantity reaches one bunch, the default value is 3 seconds.

13. Middle Stripping: some wires need middle cutting of wire covering but the wire cores don't need cutting-off. This machine can cut the wire covering at most 10 places. The position-length of these 10 places of wire covering cutting means the distance between the position of wire covering cutting and the wire tail. If the machine cuts less than 10 times, the data of not cutting is 0000. For example, select (PRG:60-89) press the decimal point on the key of the stripping position to turn on or off the middle stripping program, suppose the total length is set at 1000mm, the wire head and the wire tail are stripped 10mm, and both are

half-stripping, the diameter of wire core is 35, the knife retreating is 08, the delay and the quantity per bunch are set at default values. If you only want to cut 4 segments in average in the middle, every segment should be stripped 5mm (the stripped distance can be adjusted according to tightness of the wire), you can set as follows:

PRG: 01	SPD: 05
LEN: 1000	AMT: 0000
A-C: 10.0	A-S: 07
B-C: 10.0	B-S: 07

TOT: 1000	GRP:0100
DLY: 03	M S:05
MS0: 0200	MS1: 0400
MS2: 0600	MS3: 0800

MS4: 0000	MS5: 0000
MS6: 0000	MS7: 0000
MS8: 0000	MS9: 0000
DIA: 35	RTL: 08

Note: The position of the first cutting of middle stripping is counted from the wire head, namely, it means the middle stripping 0: 0200 is the section of the wire head.

14. Stripping: the back two-digit of the stripping parameters means the length of middle stripping of the wire. The stripped distance is related to the intensity of the wire. The higher the intensity is, the harder to draw the knife away, the greater

impact to the knife, and the lower the intensity is, the easier to draw the knife away. This function is related to the wrapping tightness between the wire covering and the wire core. and also related to the material of the wire covering.

15. Knife Retreating: means the knife will retreat to a certain position to strip the wire covering after the knife cuts the wire covering (01-20 in general, the data for reference only) generally the set parameter is small if the wire covering is thin, and the set parameter is big if the wire covering is thick.

## Faults and Clearances

### The wire head can't be stripped off

1. Check the cutting depth of wire, adjust the value of diameter of wire core to smaller.
2. The gap between the wire-inlet conveying rollers is too big, adjust the gap to smaller.
3. Whether the set length of head stripping is more than 2 mm.
4. There is dirty object in the wire-inlet pipe.
5. The knife retreating is set too big, adjust it to smaller.

### The wire tail can't be stripped off

1. Check the cutting depth of wire, adjust the value of diameter of wire core to smaller.

2. The gap between the wire-outlet conveying rollers is too big, adjust the gap to smaller.
3. Whether the set length of head stripping is more than 2 mm.
4. The knife retreating is set too big, adjust it to smaller.

#### The wire covering is crushed

1. Adjust the gap between the wire-inlet and wire-outlet conveying rollers .
2. Contact our factory to replace the conveying rollers.

#### The wire core is cut broken

1. Adjust the value of diameter of wire core to a proper extent.

Uneven in length, the actual length of wire is  $\geq$  the set length of wire

2. The gap between wire-inlet conveying rollers is too big, and sometimes the wire head can't be stripped off. If the wire length of un-stripped wire head is more than the set wire length, adjust the wire-inlet gap adjusting rollers to increase the pressure.

3. There is dirty object in the wire-inlet pipe.

4. Adjust the pressure of wire-inlet conveying rollers.

Uneven in length, the actual length of wire is  $\leq$  the set length of wire.

1. The wires are uneven in thickness.

2. There is dirty object on the rollers, they need clearing.  
The wire-inlet and wire-outlet conveying rollers slip because of the wax on the surface of wire.

3. Take out the wire, set the program at “00”, idle the machine then stop the machine to check whether the wire-inlet or wire-outlet rollers rotate smoothly or whether they are seized up.

4. The wire rack is seized up and it leads to the inlet wire slips.

Partial wire cores are too long.

1. The diameter of wire core is too small, the knife edge cuts into the wire core and the wire core is brought out after stripping, increase the value of diameter of wire core by 1-2.

2. The knife retreating is set too small, adjust it to a little bigger.

The wires can't be cut off sometimes because they are linked together with one another.

1. Oil the moving parts of knife edge with engine oil and try again. (Oil once every 8 hours of running)

2. Adjust the speed slow and try again.

3. Check the wire to see whether its size is less than AWG 10# (6mm<sup>2</sup>).

4. Whether the knife becomes blunt or not.

### The knife edge leans on wire cutting

1. The wire itself is too curved, it needs straightening.
2. The cutting position of the wire doesn't align towards the center of the knife edge.

## Attached Parts

This machine adopts paper box foam packing; the user should take out and count the packing bags for attached parts after unpacking the paper box, then place the machine on a smooth worktable and prepare a qualified power socket.

### **Basic Spare Parts**

- |                                    |               |
|------------------------------------|---------------|
| <b>1. Wire Stripping Machine</b>   | <b>1 sets</b> |
| <b>2. Inner Hexagon Tool</b>       | <b>2 pcs</b>  |
| <b>3. English Operation Manual</b> | <b>1copy</b>  |
| <b>4. Power-line</b>               | <b>1 pc</b>   |
| <b>5. Knife Blade</b>              | <b>2 pcs</b>  |
| <b>6. Fuse</b>                     | <b>3 pcs</b>  |

### **Optional Parts**

- 1. Wire Straightener**
- 2. Iron Roller**
- 3. Rubber Roller**
- 4. Synchronous Belt**

