

CASTING C351

INSTRUCTION MANUAL

Manufactured and distributed by :

KODERA ELECTRONICS CO., LTD.

808-8, shimonara, Gifu-city,

Gifu, JAPAN

Phone: 058-272-8333

Facsimile: 058-275-0002

Agent :

Table of Contents

Page

1. Safety	
1.1 Notes on Safety	1
1.2 Precautions in Installation site.....	4
2. Installation of CN-03	5
3. Name of components and actuations on the front panel.....	6
4. Explanation of every component on operation panel.....	7
5. How to switch on power source.....	9
6. How to set up the processing conditions.....	10
7. How to set up processing for tube cutting and cutting only.....	18
8. On the pressure adjustment.....	18
9. Setting error.....	18
10. When a trial processing is simply desired.....	19
11. How to take the wires out after processing.....	19
12. Special Modes of C351.....	20
13. Table of Commands for C351.....	22
14. Explanation of each command.....	23
15. Memory Function.....	27
16. Removal and Replacement of wearing Parts	
16.1 Replacement of guide pipe.....	28
16.2 Replacement of wire rod guide.....	28
16.3 Replacement of blades.....	29
17. Maintenance and inspection.....	31
18. Trouble shooting.....	32
19. List of main optional parts	35

Specifications

1. Safety

1.1 Notes on safety

Please read over carefully the instructions contained herein before installation, and use this control unit properly in the optimum method. Please store this instruction manual in a safe place.

- In this section, safety notes are shown under two categories; "Warning" and "Caution".

 Warnings: If not observed, serious injury may result.

 Cautions: If not observed, minor or moderate injury, or objective damage may result.

Precautions in Handling

 Warning - Although safety cover is provided, do not operate the unit when the safety measurements is off or when it is not working.

If not observed, injury may result.

 Warning - Be extremely cautions when handling the cutting tool.

If not observed, injury may result.

 Warning - Keep away from blades, otherwise injury may result.

If not observed, injury may result.

 Warning - Do not place a flammable spray can, such as insecticide or paint, near the fan or apply such apray to the fan.

If not observed, fire may result.

 Cautions - Do not touch a switch with a wet hand.
If not observed, electric shock may result.

 Cautions - Do not sprinkle water over the unit.
If not observed, electric shock or fire may result.

 Cautions - Do not block the ventilator.
The overload may lead to a faulty condition.

 Cautions - Observe the capacity of the breaker
and fuse.
Do not substitute a fuse with wire or other objects. This may cause fire.
If the breaker is down or fuse is melt often, contact your local sales agent.

 Cautions - If you notice any abnormality (burnt
smell, etc.), stop the operation immedi-
ately, turn off the switch and contact
your local sales agent.
If you keep the operation with the presence of abnormality, faults, electric
shock or fire may result.

 Cautions - Do not stand or place any objects on
the unit.
Injury may result due to falling down.

 Cautions - Before cleaning, maintenance, or inspec-
tion, pull out the socket from the wall
outlet and make sure that there is no
power supply.
If not observer, injury or electric shock may result.

 Cautions - Please consult your local sales agent for repair.

If not repaired properly, it may cause electric shock or fire.

 Cautions - The measure attached to the unit is for reference purpose only. If you need a precise measurement, use your measuring device.

 Cautions - This unit is intended for cutting and stripping the wire. Using the unit for other purposes or remodeling it is not allowed.

The overload may lead to a faulty condition.

 Cautions - Do not input a pressure value higher than 6.5 kgf/cm^2 .

 Cautions - Do not damp the wire waste with the ordinary refuse.

The wire waste will emit toxic gas when burnt.

 Cautions - After processing, the wire will be ejected from the left roller. Clear the left side of the unit before processing so that no injury could result.

 Cautions - The wire waste will be collected in the strip waste box. When the box is full, dispose of the waste in the specified method according to the material.

1. 2. Precautions in Installation site

 Warning - A desk for the unit should be able to:

- stand the weight of the unit (28kg) and provide horizontal surface, and
- provide a sufficient area for the unit (outer dimension: W450mm × D450mm).

If not installed properly, injury due to falling down of the unit, vibration or excessive operation noise may result.

 Cautions - Provide the earth leakage breaker.
If not provided, electric shock or fire may result.

 Cautions - The voltage is AC110V or AC220V.
Always plug into a special socket for C351.
If not observed, fire may result.

 Cautions - Always protect from exposure to moisture (Rain, Spraying Water etc)
If not observed, faults, electric shock or fire may result.

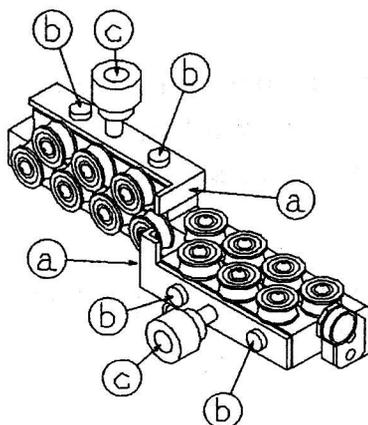
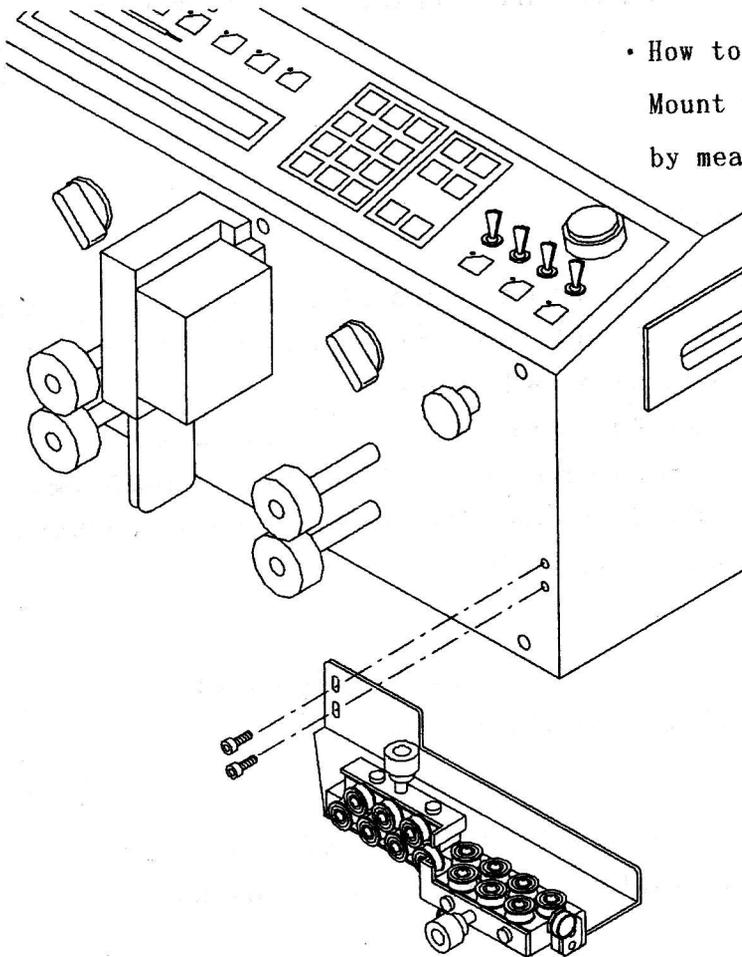
 Cautions - Always keep free from vibrations.
If not observed, faults or injury may result.

2. Installation of CN-03

Installation and adjustment of the wire straightener Model:CN-03

• How to install:

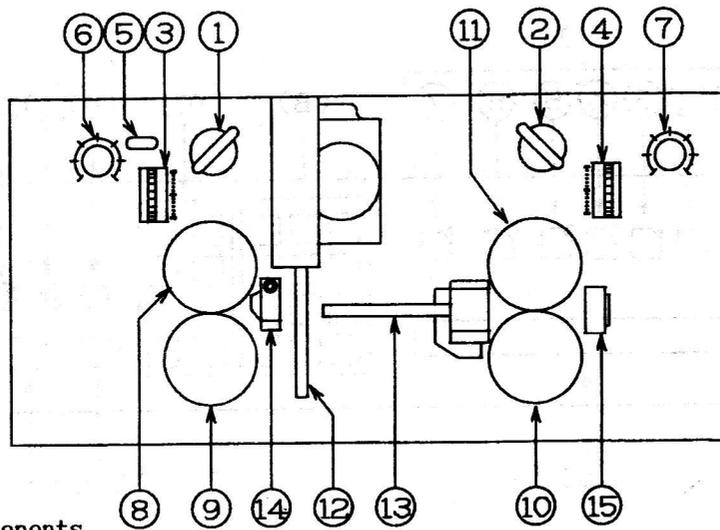
Mount the CN-03 onto the machine by means of the cap screw "A".



• How to adjust:

Open the CN-03 by pushing "a" toward left. Pass the wire through the pulleys and close the CN-03 by pushing "b" toward right. Then, tighten it by means of adjusting screw "C".

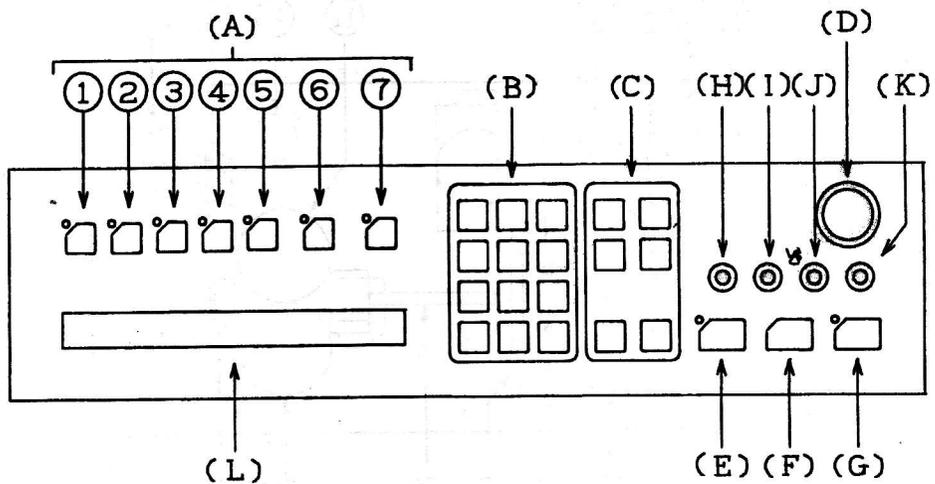
3. Name and function of components on front panel



Name of Components

- (1) Left side knob for roller UP/DOWN
- (2) Right side knob for roller UP/DOWN
- (3) Left side roller gap adjusting dial
- (4) Right side roller gap adjusting dial
- (5) Wire rod detection indicator lamp
- (6) Left side roller pressure adjustment knob
- (7) Right side roller pressure adjustment knob
- (8) Left upper roller
- (9) Left lower roller
- (10) Right lower roller
- (11) Right upper roller
- (12) Cutter block
- (13) Guide pipe
- (14) Left side wire rod guide
- (15) Right side wire rod guide

4. Explanation of each component on operation panel



Name of Each Component

(A) Group of selector keys

- (1) Adjusting the front stripping length [F.S.]
- (2) Adjusting the front half-stripping length [F.H.S.]
- (3) Adjusting the total wire length [LENGTH]
- (4) Adjusting the rear half-stripping Length [R.H.S.]
- (5) Adjusting the rear stripping length [R.S.]
- (6) Adjusting the blade depth when stripping is to be made [BF]
- (7) Adjusting the number of wire rods to be processed [PIECES]

(B) Group of Keys for entering numerical values (Ten-Keys).

For setting the numerical values using the digits [0] to [9].

[Y/.] ... (1) When the Y value is to be set (See P.13).

(2) When mid-stripping is to be made (See P.21).

(3) When figures smaller than a decimal point are to be set .

(4) When the wire collecting function is activated(See P.20).

[SET] ... This shall be depressed when the current value is to be set.

(C) Group of function keys

[-1] The current number (quantity of wire rods to be processed) will be reduced by -1.

[CE] Clear key.

[F] Functions key (function calling key).

[TOTAL] ... Key for displaying the total number of wire rods to be processed.

[+] [-] ... The keys to increase or decrease by 1 point each when the value of BF or the value of Y are to be changed. ✖

[CE] with the [-1] being depressed →

The current number of wire rods to be processed will be set to 0.

[CE] with the [F] being depressed→

All the settings will be cleared and restored to 0.
(The TOTAL number will also be cleared to '0'.)

(D) POWER ... Power ON/OFF switch button.

(E) START ... Start key (Start of work).

(F) STOP Cycle Stop key (Work stop, alarm and error sounds stop)

(G) E.STOP ... E.Stop key (Emergency stop)

(H) Cutting length mode selector switch

Normal ... When the residual sheath is longer than 48.9mm.

Short When the residual sheath is shorter than 49mm.

(I) Guide pipe selector switch

Standard

Thin wire

(J) Finish-alarm checking switch

Alarm ON The alarm sounds to notify the end of processing all the set wire rods.

Alarm OFF.... The alarm will not sound to notify the end of processing all the set wire rods.

(K) Sensor-alarm checking switch.

Sensor ON The alarm will be sounded when the sensor detects a wire rod.

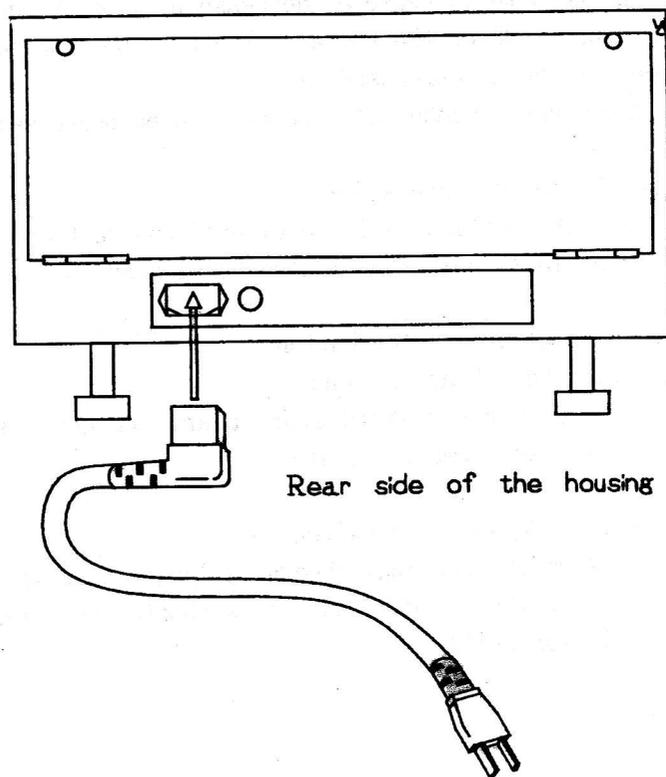
Sensor OFF.... The alarm will not be sounded when the sensor detects a wire rod.

(L) Liquid crystal display panel

5. How to switch on the power source.

A plug receptacle is arranged in parallel with the fuse on the lower side of the rear face of the C351 main body.

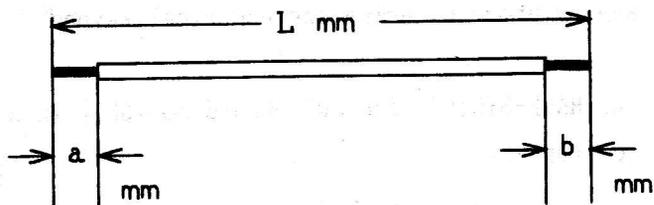
Plug the accessory power cord innermost into the receptacle. (Attention should be paid to the power source voltage which is indicated thereon).



- Type of power supply earthing: IT(system which is not directly earthed)
 - When the [POWER] button on the operation panel is pressed down, the lamp comes on with the power source being switched on. With the button being depressed again, the power source is switched off.
- The usual switching ON/OFF of the power source shall be operated by this POWER button.

(NOTE) A high-pitched tone will be heard when the power is switched ON. This is an interrupted signal for the high frequency energy source and can be disregarded.

6. How to set up the processing conditions.



If the wire rod in the above figure is to be processed, the setting shall usually be made in the order from (1) through (7) of the selector key group on the operation panel.

Cutting length mode: (1) The cutting length mode shall be set to SHORT if the sheath residual length should be of especially short processing length, less than 49mm, namely, $L - (a+b) \leq 48.9\text{mm}$, but the normal mode shall be used entirely when the residual length should be longer than 48.9mm.

Other switches: (2) The guide pipe selector SW (thin wire · standard switch) shall usually be set to the standard position, while the finish-alarm and sensor-alarm shall be set to ON.

Setting: (1) First depress the "Front stripping length set key".

As the "FRONT STRIP" is indicated on the lower line on the display panel, the desired length should be input from the Ten keys. If the 'a' of the description "FRONT STRIP'a'" being displayed is correct, press the [SET] key, then the front stripping length will be set.

(2) Next, the "F. HALF-STRIP" which is an abbreviation of "Front half-stripping" shall be handled, and the setting should be made by inputting [0] + [SET] in this case.

(3) "OVERALL LENGTH": This is the "L" size in the said figure. The setting should be made by inputting the value in the same way as above by using the numerical keypad.

(4) "R. HALF-STRIP": The "0" should be [SET] in a similar manner to step (2).

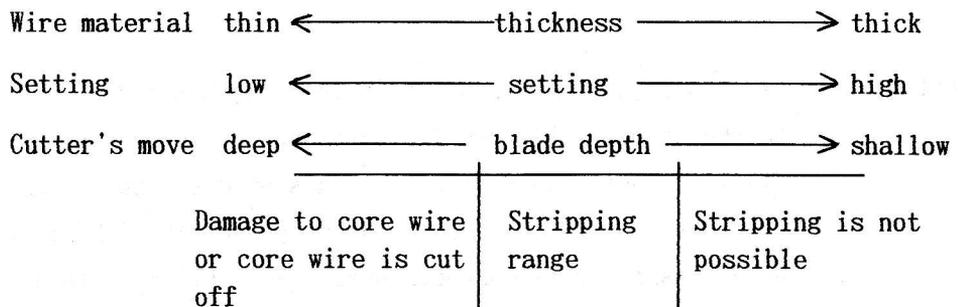
(5) "REAR STRIP": This should be [SET] after setting "b".

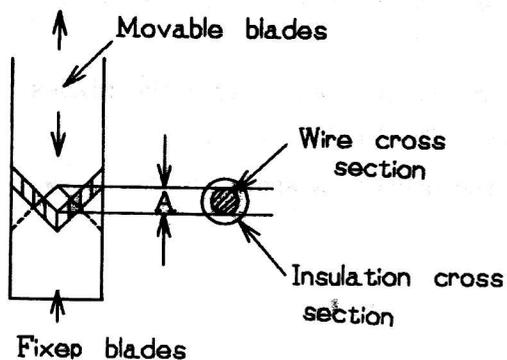
(6) Setting the blade depth at the time of stripping.

Since the movement of the blade when cutting wire is set automatically, it is not necessary to set it. However, when the blade's stripping depth is not appropriate, it may not strip the wire properly, damage the core wire, or cut off the wire completely.

When the blade setting is high, the blade depth will decrease. (When the setting is increased by 1 point, the blade depth will decrease by 0.0215mm).

For a thicker wire, set the blade setting high.





The numerical value should be continued to be made larger if any flaws should be found with the core wire, and the value shall be made smaller if the sheath can not be stripped.

The optimum numerical value should be selected and its numerical value should be entered into memory.

Guidance of rough values

sq.	AWG	Numerical value of cutter
0.08	#28	32 - 39
0.3	#22	51 - 59
0.75	#18	85 - 97
1.25	#16	98 - 106
3.5	#12	149 - 162
5.5	#10	190 - 205

The setting of a value larger than 350 will cause an error.

If this "Blade depth setting at time of stripping" key has been selected, the change in this numerical value can be made larger or smaller by the [+] or [-] key in "Function keys group" (The thicker the wire rod, the larger the figure becomes). Please refer to this Table which is referred to in the test report of each C351 machine you have purchased.

If the blades have been set quite close to the core wire at this point, and although it maybe the optimum setting, there is a fear of catching the core wire when the sheath is stripped off.

In this case, the "A" in said figure, namely, the gap between the blades can be widened by pressing the [Y/.] key. The blade value which has already been set can be pushed back by the degree as shown in the below table.

Y values (Unit: mm)

Y	The degree for the blades to be pushed back
0	0
1	0.02
2	0.04
3	0.06
4	0.09
5	0.11
6	0.13
7	0.15
10	0.22

Y	The degree for the blades to be pushed back
15	0.32
20	0.43
25	0.54
30	0.65
35	0.76
40	0.86
45	0.97
50	1.08
55	1.19

Y	The degree for the blades to be pushed back
60	1.30
65	1.40
70	1.51
75	1.62
80	1.73
85	1.84
90	1.94
95	2.05
100	2.16

※The blade gap will be increased by about 0.0216mm each according to increase of Y value.

(7) Next, the number of wire rods to be processed shall be set up.

Select the key for the number of wire rods, input and set the quantity in the same manner by using the numerical keypad.

The wire rods can be set upto 99,999 pcs. maximum. 2 or 3 wires should be set when trial processing is to be made.

The settings of all the processing conditions can be input in this way.

• when the setting has been erroneous or is desired to be changed:

If there is any setting set properly or you wish to change, press the select key for that setting. Enter the desired value and press [SET] key.

If [CE] is depressed, the selected value can be re-set to "0" by use of the [SET] key.

• If the current number is desired to be set to "0":

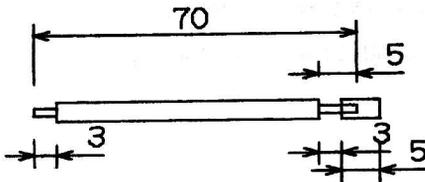
Push [CE] while keeping the [-1] key depressed.

• If the current set number of wire rods is to be decreased by several lengths only:

Push the [-1] key in accordance with the desired reduction.

(Example) Please follow the directions below with reference to the accompanying diagram as an example of stripping and semi-stripping.

NOTE... The data will not be secure until the [SET] button is depressed.



10 pcs. of 0.2 sq.

- | | Selector key | Ten key | Set key |
|--|--------------|-----------|---------|
| a, Depress the keys in the order of | [F.S.] | [3] | [SET] |
| b, Depress the keys in the order of | [F.H.S.] | [0] | [SET] |
| c, Depress the keys in the order of | [LENGTH] | [7] [0] | [SET] |
| d, Depress the keys in the order of | [R.H.S.] | [3] | [SET] |
| e, Depress the keys in the order of | [R.S.] | [5] | [SET] |
| f, Depress the keys in the order of | [BF] | [4] [0] | [SET] |
| (For the numerical value, see P,11 on the preceding page). | | | |
| g, Depress the keys in the order of | [PIECES] | [1] [0] | [SET] |
| h, Depress the keys in the order of | [BF] | [Y/.] [8] | [SET] |
| (For the numerical value, see P,13 above) | | | |

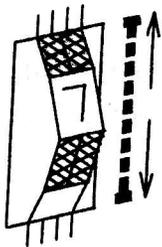
How to make an automatic setting:

If [CE] is pressed down while keeping [F] pressed, all the displays will be cleared to '0' [* TOTAL (the total number of wire rods) which so far has been stored will also be cleared to '0'.], and (a) F.S. will light up. If a numerical value should be set up, the [F.H.S.] in Step (b) will be automatically lit up. Thereafter, the [BF] will be lit up if the settings are completed down to the number of wire rods in Step(g). At this point, set up Y [Step(h) as described above].

(8) Adjusting the gap of left side roller.

Manipulate the the left side roller UP/DOWN knob to pinch the wire rod which is desired to be processed and keep the knob at the D (DOWN) position (in the state for the roller being lowered). Turn the roller gap dial on the mechanism block at the front, and adjust the dial to the degree so that the wire rod desired to be processed can not be pulled out even by hand.

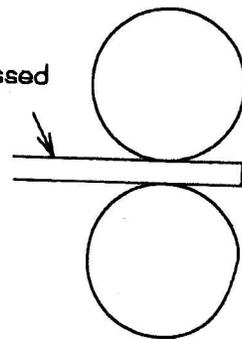
Note: Take care to set the width of the gap depending on the kind of wire used.



Wire desired to be processed

Turn the dial upward - Wider gap

Turn the dial downward - Narrower gap



Left side roller

Adjusting the gap of right side roller:
In general the gap should preferably be set to its narrowest setting. However, adjust the gap according to the kind of wire rod (ie. If too narrow the wire may be crushed).

(9) Setting the wire rod.

Keep the right side roller UP/DOWN knob to the U (UP) position (in the state of the roller being lifted).
Be sure to manually insert the wire rod from the right side wire rod guide, right side roller, guide pipe and a bit to the left of the blades (inserting it too far will cause an error), then put the right side roller down.

(10) With the above procedures, the preparation has been completed.

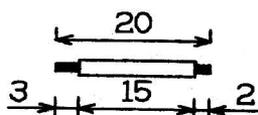
The wire rod will be processed if the [START] button is pressed down.

Check the processed wire rod, and if it is found acceptable, set the number of wire rods and enter regular processing.

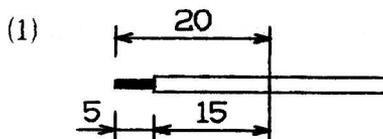
Note: When the length of the aforementioned sheath should be shorter than 49mm, the cutting length mode switch should be set to SHORT, but in this case, there is no need for adjusting the sensor gap. Turn the roller UP/DOWN knob to set the left side roller to the U position, and start the machine after putting only the right side roller down.

※ If the processed wire rods should be stacked on the left side roller, they should be processed after removing the left side lower roller.

☆ What is short mode?

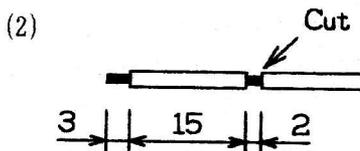


To produce the stripped wire rod of...

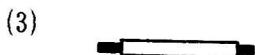


...cut the sheath at this position.

Strip the sheath by 5mm



Move the sheath to swing out the stripped sheath.



Finish the process by cutting the wire rod.

7. How to set up the processing for tube cutting and cutting only.

Only the total length shall be input and the F.S., R.S., F.R.S. and F.H.S. shall all be set to '0'.

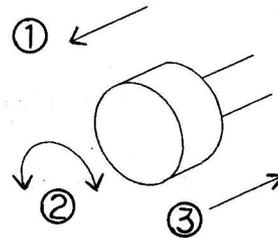
Any numerical values are acceptable for BF and Y. The number of wire rods and the sensor gap need to be adjusted.

8. On the pressure adjustment.

The pressure between upper and lower rollers should be increased if the wire rod is especially stiff or in the case of the wire rod whose sheath is difficult to strip off. The pressure adjustment knobs located on both sides of the front panel should be pulled and turned. The greater the numerical value is, the higher the pressure becomes.

Wire rod guide roller knob:

The wire rod guide roller is used to stably supply the wire rods during processing. Pulling up the wire guide roller knob lifts and opens the upper wire guide roller.



9. Setting error

In the following cases, a "beeping" sound will occur and result in an error even if the [START] key is pressed down. After clearing the error by pressing down the [STOP] key, check to see if any of the following applicable causes should exist.

- (1) The sheath length proves to be shorter than 49mm after its processing in normal mode To be changed to short mode.
- (2) The sheath length proves to be longer than 48.9mm after its processing in short mode To be changed to normal mode.
- (3) When the half-stripped length is longer than the stripped length The result of a setting mistake.
- (4) The total length is too long (when it exceeds the length of 9.999mm).
- (5) The F.S. is longer than 47.9mm and the R.S. is longer than 47.9mm.

(6) When the roller speed (F1) is set at 8 or 9.

(7) When the cutter speed (F2) is set at 8 or 9.

However, if the preceding processings are necessary, processing can be continued with [F] [5] [2] [SET] with no regard to said error.

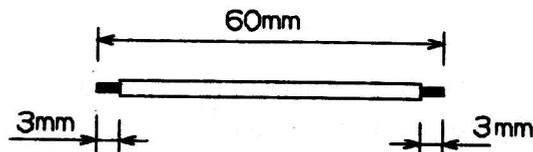
However, attention must be paid to some processing which are not necessarily acceptable.

(8) When the total of stripped length values is longer than the total length value The result of a setting mistake.

(9) When the preset value of BF is too large.

1 0. When a trial processing is simply desired:

Press the [START] key while keeping [STOP] key depressed.



Only a single wire rod can be processed as illustrated in the above figure with no regard to the setting. If any core wire breakage should be found as a result of trialing, set only the value of BF, then you can check it easily before processing a long wire rod.

1 1. How to take the wires out after processing:

Turn knob for the roller UP/DOWN on the front panel, lift up the roller and take the wires out.

1 2. Special modes of C351.

(1) Wire collection function

This function is used when, for example, a total processed quantity of 3,000 wires is to be divided into 10 batches of 300 wires each.

(A) Setting: Total 3,000 wires to process, 10 batches of 300 wires each.

(B) procedure for (A).

1. Press the keys, [3] [0] [0] [0] and [SET] in order.
(Total processing number setting).

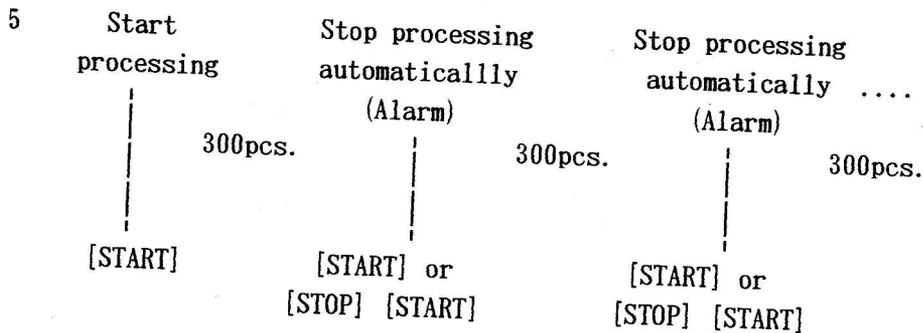
2. Press the [Y/.] key on the keypad (Wire collection call-up).
The display of PIECES/UNIT will be shown on the liquid crystal display panel.

3. Input [3] [0] [0] from the keypad, then press the [SET] key.
(Wire collection number setting)

/ 3 0 0 0 (Processing number)
_____ Read it as "slash".

The slash is shown on the left of the processing number displayed on the liquid crystal display panel.

4 Pressing [START] to begin processing.



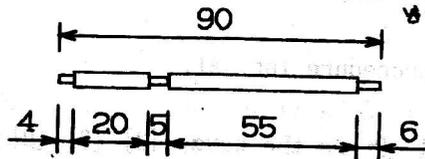
How to delete the wire collection setting:

Press again the keys for [PIECES], [3] [0] [0] [0] and [SET] in order, or [PIECES], [Y/.] [0] and [SET] in order.

(2) Mid-stripping function

Mid-stripping is an application of half-stripping processing using the C351, but processing is not possible sometimes if the wire core is adhered strongly to by the insulation.

Procedure (Setting example)



- | | Selector key | Ten key | Set key |
|-------------------------------------|--------------|-------------------------|---------|
| a, Depress the keys in the order of | [F.S.] | [2] [9] [Y/.] [Y./] [4] | [SET] |
| b, Depress the keys in the order of | [F.H.S.] | [5] | [SET] |
| c, Depress the keys in the order of | [LENGTH] | [9] [0] | [SET] |
| d, Depress the keys in the order of | [R.H.S.] | [0] | [SET] |
| e, Depress the keys in the order of | [R.S.] | [6] | [SET] |

([F] [5] [3] are set automatically.)

◎F3 (F. CORRECTION)

This is used to change BF at front & rear ends. The correction will be done over/below 50.

If the number is reduced to 49, 48 ..., cutting depth will become deeper by 0.02mm respectively at the rear end.

If the number is increased to 51, 52 ..., cutting depth will become shallower by 0.02mm respectively at the rear end. ✱

✱If the value of correction is two digits, a "#" mark will be shown on the display panel. Press F3 again if confirmation of the settings is required.

◎F5 (TEST MODE)

This is the command for error release, mid-stripping and twisting.

[F] [5] [.] [.] [SET]

└─ 1st digit

- 0 Normal
- 1 Test mode
- 2 Normal process / Error release
- 3 Mid-stripping
- 4 Mid-stripping / Error release
- 5 Twisting for rear end
- 6 Twisting for front end
- 7 Twisting front & rear ends with same direction to the cable twist
- 8 Twisting front & rear ends with opposite direction to the cable twisting

└─ 2nd digit

- 1 Error release
- 2 Test for step feed
- 3 Test for step feed / error release

✱Input of one digit only is possible. The 2nd digit will be used for releasing the twisting error, or step feeding to adjust the cutting depth during the process time.

<What is the stepping feed?>

This is to make slight and delicate adjustment of the BF value or the value of K using the [+] & [-] keys by having the movement stopped when the blade is closed to the BF or K value during process time.

(If slight adjustment by [+] & [-] is made when the blade is closed to the front end, it will be a correction of the front end on F3.)

※5~8 on twisting mode will be used only when the twisting unit which is specially developed for C351 is applied.

※If two digits are input, a "#" mark will be shown on the LCD.
Press F5 again if confirmation of settings is required.

◎F6 (STRIP MODE)

- 0 Normal
- 1 Front end cut mode
- 2 Rear end cut mode
- 3 Front & rear ends cut mode
- 4 Slug removing front end
- 5 Slug removing front end / rear end cut mode

<What is cut mode? >

This is to cut the wire rods after half-stripping has been done. Input of front and rear ends is done in the normal way, but the remaining wire section (length mm) after mid-stripping must be added plus an additional 2mm. If combined with twisting, a fine front end may be obtained.

<What is slug removing front end ? >

This is to remove the slugs by the left side roller after front end front half-stripping is done.

○F7 (TWIST RATE)

There are 10 steps (from 0 to 9) for twisting strength. 0 is the weakest. As the number increases so to does the twisting strength.

※This is used only with the twisting unit for C351.

○F8 (F. Y)

This function is used at the time when Y values at front and rear ends are changed. When F8 is set, it works for front end only. Input of two digits will be shown with a "#" mark on the display.

15. Memory function

Process conditions, except for the number of pieces to be processed and the number of pieces for wire collecting, will be memorized for up to 200 different jobs (from No,0 to No,199).

<How to write data to memory >

- ①Have process conditions to be registered displayed on the panel.
- ②By pressing [F] and [Y/.], "MEMORY READ" will be shown, then press [SET] so that "MEMORY WRITE" will be displayed on the panel.
- ③If location to be memorized under is No,1 , for example, press [1] [SET], then data displayed is memorized under No,1.

<How to recall >

- ①By pressing [F] & [Y/.], "MEMORY READ" will be shown on the panel.
- ②If the number to recall is "16", for example, press [1] [6] and the data entered under No.16 is recalled.

<All Clear >

- ①After pressing the [F] key hold down the [CE] key and continually press [Y/.].
- ②When buzzer sounds three times, all clear (deletion) is completed.

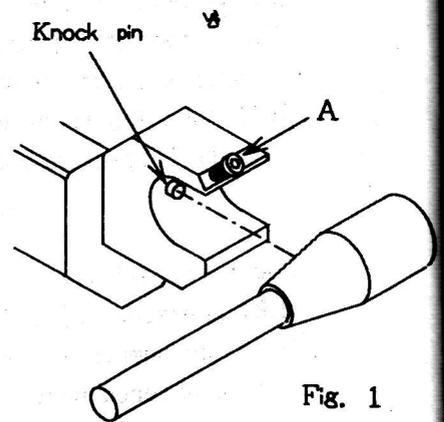
16. Removal and Replacement of Wearing Parts

Always turn the illuminated ON/OFF switch of the C351 to OFF prior to carrying out any conversion, maintenance or inspection work on the machine.

16-1. Replacement of guide pipe (See Fig.1)

-Dismount Loosen screw A and pull out to this side.

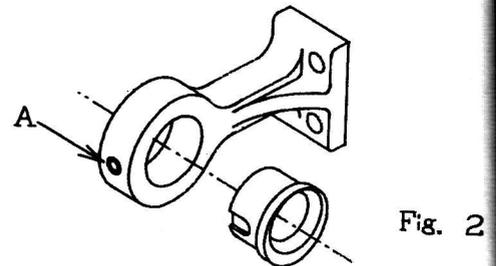
-Mount Fix the guide pipe so that the knock pin is inserted into the knock hole of the guide pipe, and fasten screw A.



16-2. Replacement of wire rod guide (See Fig.2)

-Dismount Loosen screw A and pull out to the right.

-Mount Fully insert the wire rod guide so that screw A fits in the groove of the wire rod guide.



16-3. Replacement of blades

- Remove screw A and the blade block.
Then gently pull out the blade block horizontally as the knock pin remains inserted. (See Fig.3)

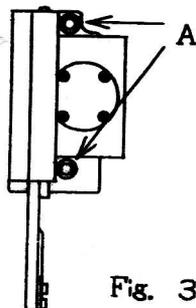


Fig. 3

- Remove screw B and then the lower blade. (See Fig.4)

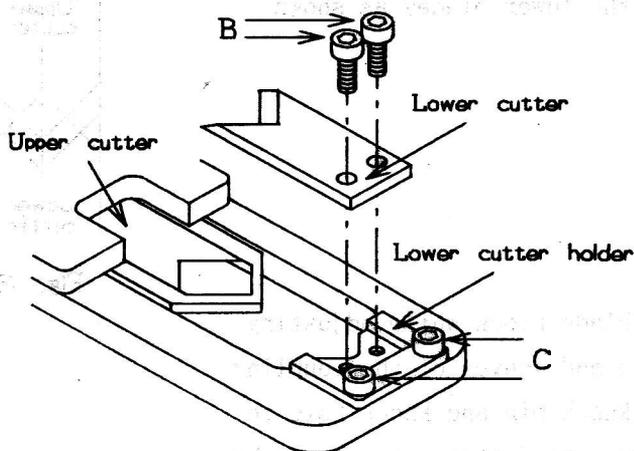


Fig. 4

- Remove screw C, and pull out the upper blade in the direction of the blade. (See Fig.5).
- To mount the blade, first insert the upper blade into the upper blade holder in reverse direction to the arrow as shown in Fig.5, and fix it with screw C.
- Then completely insert the lower blade into the lower blade holder, and fix it with screw B.

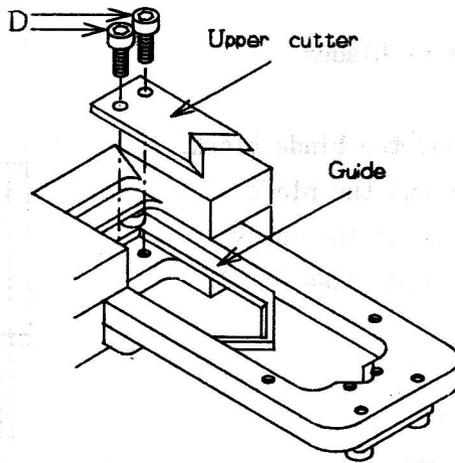


Fig. 5

-After fitting the blade, confirm that no dislocation can be found between the upper and the lower blades as shown in Fig.6.

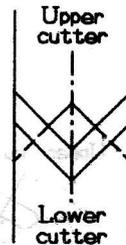


Fig. 6

-Mount the blade block while adjusting the concave and convex of the coupling, the pins, knock pin and knock hole to fit exactly, and fasten screw A as shown in Fig. 2. (See Fig.7)

*Take utmost care in handling the blades.

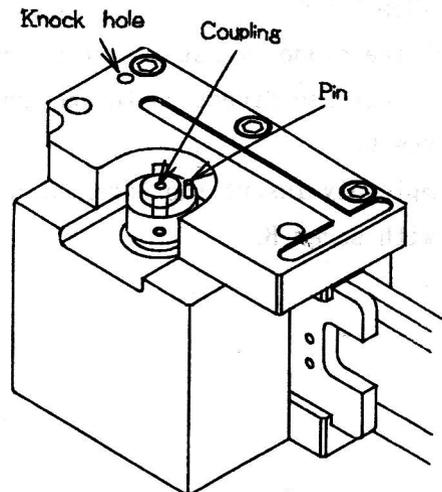


Fig. 7

17. Maintenance and inspection

Always turn the illuminated ON/OFF switch of the C351 to OFF prior to carrying out any conversion, maintenance or inspection work on the machine.

BLADE BLOCK

-Remove screw A and pour grease into hole A.

-Fasten screw A.

*To prevent the blade block from seizing, check that grease is always supplied.

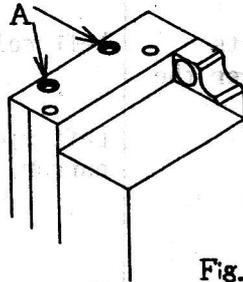


Fig. 8

Make sure the blades are always lubricated to prevent them from jamming, i.e. occasional checks are necessary.

Dirt is the most common cause of operating problems!

1 8 . Trouble shooting

Symptoms	Cause	Correspondence
<p>1) The wire is not set automatically.</p> <p>Rollers do not rotate.</p> <p>Processing starts immediately after the start.</p> <p>The wire is fed out continuously.</p>	<p>It is set to the Short Mode.</p> <p>Left roller is UP.</p> <p>Left side roller gap is too narrow.</p> <p>The sensor alarm switch is OFF.</p> <p>Left side roller gap is too wide . (The wire is not detected.)</p>	<p>Change it to the Normal Mode. (In Short Mode, wire is not set automatically.)</p> <p>Set the left roller DOWN.</p> <p>Set the clearance wider. See P,16 [Adjusting the gap of left side roller]</p> <p>Turn ON the sensor alarm switch.</p> <p>Set the clearance narrower. See,16 [Adjusting the gap of left side roller]</p>
<p>2) Cannot cutting.</p>	<p>Cutting speed too fast.</p> <p>Blades are damaged or get blunted.</p>	<p>Decrease cutting speed See P,23</p> <p>Replace blades with new one. See P,29</p>
<p>3) If no stripping at front end can be made or stripping results are varied.</p>	<p>Right side roller gap is too large.</p> <p>Blade and Y value is too high.</p> <p>Functions 3 is set to any value other than 0.</p> <p>Roller pressure for right side roller is too weak.</p> <p>Stripping speed too fast.</p>	<p>Narrow right side roller gap.</p> <p>Set the blade and Y value to the appropriate level.</p> <p>Set functions 3 to 0 SET.</p> <p>Increase roller pressure for right side roller. See P,18</p> <p>Decrease stripping speed.</p>

4) If no stripping at rear end can be made or stripping results are varied.	Blades are damaged or get blunted.	Replace blades with new one. See P,29
	Left side roller gap is too large.	Narrow left side roller gap.
	Blade and Y value is too high.	Set the blade and Y value to the appropriate level.
	Functions 3 is set to any value other than 0.	Set functions 3 to 0 SET.
	Roller pressure for left side roller is too weak.	Increase roller pressure for left side roller. See P,18
	Stripping speed too fast.	Decrease stripping speed.
	Blades are damaged or get blunted.	Replace blades with new one. See P,29
5) Both ends are not stripped.	Blade and Y value is too high.	Set the blade and Y value to the appropriate level.
	Semi-strip is set to any value other than 0.	Set the semi-strip to 0 SET.
	Blades are damaged or get blunted.	Replace blades with new one. See P,29
	Blade is not adjusted. (After blade exchange.)	See P,33 [Replacement of blades]
6) Insulation, both front and rear ends, and core wire are damaged.	Roller gap is too narrow.	Enlarge the roller gap. See P,16
	Roller pressure for both sides or either of them are too strong	Decrease roller pressure. See P,18
	Appropriate drive roller is not chosen.	Replace drive roller with proper one.
7) Core wire is damaged.	Setting value for BF and Y are too small.	Increase setting value for BF and Y to appropriate point.

<p>8) Symbols such as ?, ! , <, > are displayed on the LED.</p>	<p>Guide pipe is not suited to the wire size.</p> <p>Stripped waste is attached to the wire when cutting.</p> <p>Malfunction due to noise cause by lightening, static, etc.</p>	<p>In option, change the wire guide and guide pipe to the appropriate size.</p> <p>Set the semi-stripping . (Air does not come out.) Or set the semi-stripping to 0 and use the air solenoid valve</p> <p>Press [F] [CE] simultaneously to clear the data.</p> <p>Provide protective measures against atatic electricity. (Increase the humidity in the room or connect the end of the wire and the processing unit.)</p>
---	---	---

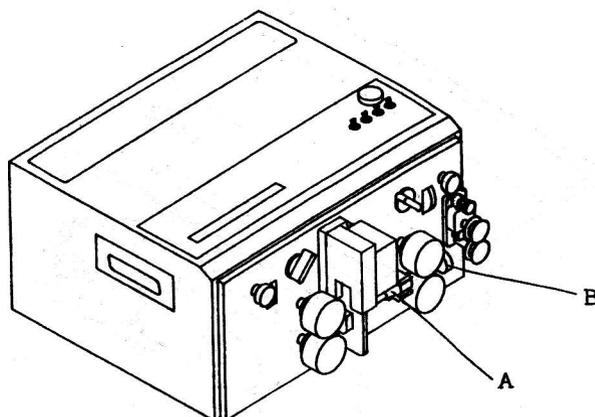
※If you cannot find out the cause of error, decrease both cutting speed and stripping speed so that you can check machine's motion by your eyes.

【IN CASE YOU CANNOT IMPROVE PROCESSING CONDITION BY THE ABOVE PROCEDURE, OR IN CASE CUTTER ERROR OR MEMORY ERROR OCCURED】

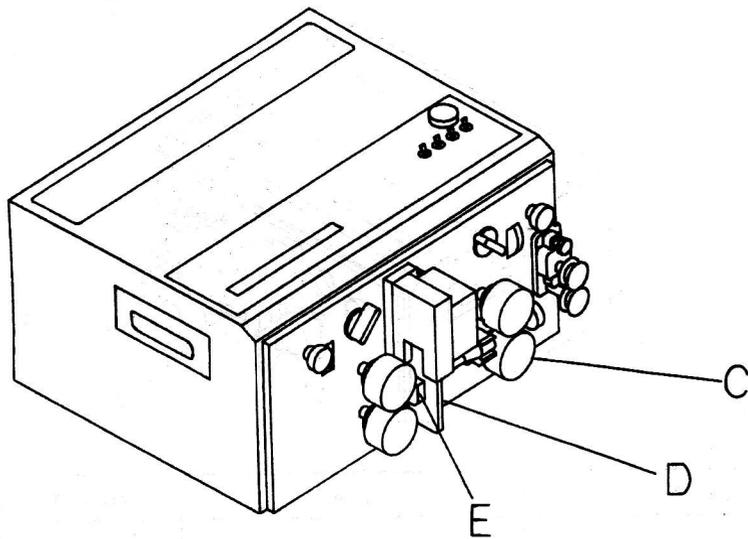
There is a possibility that the error is caused by a static noise. So pressing keys of [F] [CE] after the machine return to zero-position, all data in the memory area and display panel can be cleared. (The data which is stored by using memory function remains unchanged.) Set process condition again and check processing resluts.

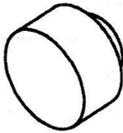
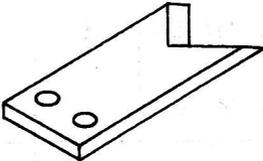
In case cutter error, blade error or memory error occures just when the machine switches on (machine is returning to zero-position), the above procedure cannot be used since the machine has not returned to zero-position yet. In such a case, please note that the machine will most probably return to zero-position if you keep on pushing the stop button while the error is appearing . Then, if the machine returned to zero-position, try again to clear all data.

19. List of main optional parts



mark	figure	name	order-No.	piece	note
A		Guide pipe 2 φ	07-007-A0	1	
		Guide pipe 3 φ	07-007-B0	1	
		Guide pipe 4 φ	07-007-C0	1	
		Guide pipe 5 φ	07-007-D0	1	
		Guide pipe 6 φ	07-007-E0	1	
		Guide pipe 7 φ	07-007-F0	1	standard
		Guide pipe 8 φ	07-007-G0	1	
		Guide pipe 9 φ	07-007-H0	1	
		Guide pipe 10 φ	07-007-I0	1	
		Guide pipe 11 φ	07-007-J0	1	
B		Wire guide right 4 φ	07-012-A0	1	
		Wire guide right 7 φ	07-012-B0	1	
		Wire guide right 12 φ	07-012-C0	1	standard



mark	figure	name	order-No.	pc/set	note
C		Roller coarse rough	07-005-A0	1set	4pcs, =1set standard
		Roller coarse fine	07-005-B0	1set	4pcs, =1set
		Roller sand shot	07-005-C0	1set	4pcs, =1set
		Roller polyurethane	07-005-D0	1set	4pcs, =1set
D		Blade Ultra hard thick's	07-015-A0	1set	2pcs, =1set
		Blade Ultra hard thin's	07-015-B0	1set	2pcs, =1set
		Blade S 7 thick's	07-015-C0	1set	2pcs, =1set standard
		Blade S 7 thin's	07-015-D0	1set	2pcs, =1set
E		Wire guide left 4 φ	07-013-F0	1pcs,	
		Wire guide left 7 φ	07-013-D0	1pcs,	
		Wire guide left 1 2 φ	07-013-E0	1pcs,	standard

SPECIFICATIONS

Item Model	C 3 5 1
Model	CAS Fully Automatic Type
Drive	3-axis control by the stepping pulse motors
Cutting lengths: Normal mode	49 mm to 9999 mm (Standard) 49 mm to 99999 mm (Numerical values which can be preset)
Short mode	0.1 mm to 48.9 mm
Max. O.D. to be cut	11 mm ϕ
Stripping lengths	Tip: 0.1 mm to 47.9 mm * (Standard) Rear: 0.1 mm to 47.9 mm * (Standard) 0.1 mm to 999 mm (Numerical values which can be preset) *Length varies depending on the kinds of wire rods.
Core wire size	0.08 sq. to 8 sq. (AWG 28 to 8)
Cutting allowance	Within $\pm (0.2 + 0.002 \times L)$ mm (L=Cut length)
Consumed power Power voltage	100W (When the machine is stopped.) - MAX170W AC220V $\pm 10\%$ 50/60Hz $\pm 1\%$
Size and weight	W 450mm \times D 450mm \times H 243mm, 28kg (NET)
Ambient air temperature	+5 $^{\circ}$ C \sim +40 $^{\circ}$ C
Humidity	30% \sim 95% (Non-Condensing)
Transportation and storage temperature	-25 $^{\circ}$ C \sim +55 $^{\circ}$ C
Required illumination	300 lux or more
Noise level	< 70dB

As of Oct.1st, 1996.

*The specifications are subject to change without any prior notice for the sake of improvement.