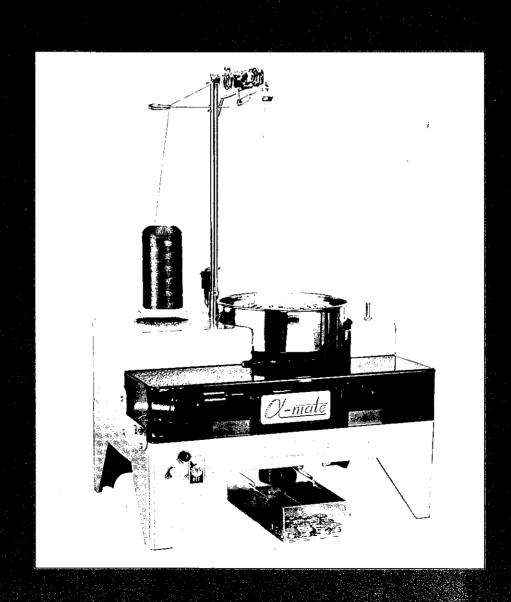
## **FULL-AUTOMATIC BOBBIN WINDER**

# **INSTRUCTION MANUAL**



#### CONTENTS

rage
1. Introduction
2. Attention in Opening the Carton Box of ALPHA-MATE F-117 EXPORT1
3. Important Note about the Bobbin Size3
4. The Correct Method of Putting Bobbins in the Hopper
5. Setting of Thread in Good Order4
6. How to Treat the Digital Auto-Counter Before Winding Operation5
7. How to Start Winding
8. Treatment of Thread Winding Volume6
9. Note on Handling Digital Auto-Counter
10. Bobbin Sensing Limit Wire and Feed Arm6
Example of Troubles from the Viewpoint of Operation and Adjusting Way
A) It does not work, even if the start button is pushed
B) It does not work, even if main switch is ON8
C) Though it works, it does not wind up9
D) It winds up, however machine is not in order
Matters Required Attention Especially before Winding11
Model F-117 Winding Data
Electric Circuit Drawing

#### 1. Introduction

Thank you for your purchase of ALPHA-MATE F-117 EXPORT.

As this machine is of compact, simple design, light weight and precise mechanism, bobbin winding operation can be done with more perfection and accuracy.

By using this machine, concentrated control of thread can be realized. On account of this, waste of time of operator for winding thread can be avoided. Further, waste of thread volume can be eliminated. It is the lavor-saving machine which concerns to increasing interest.

## 2. Attention in Opening the Carton Box of ALPHA-MATE F-117 EXPORT

When you open the carton box of ALPHA-MATE F-117 EXPORT, F-117 Thread Winding Machine and it's accessories box are put in.

First of all, take out the machine and accessories and clear away their packing and put the machine on the working table.

Then, set up the Thread Stand Pole on the machine fix the pole steadily with the setting screw.

In this time, the most important attention is to fix the position Small Thread Guide (B) which is capable for hanging the thread down vertically between the bobbin and rotary packing. (as shown in FIGURE D and E, referring to (5) Setting of thread in good order.)

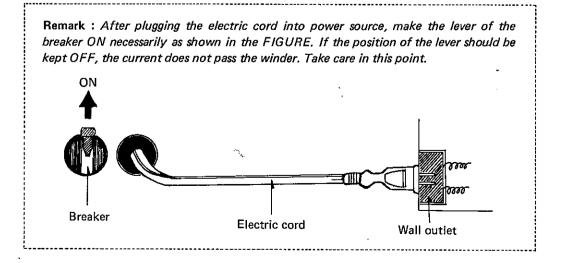
If the correct position is not always kept, any kind of winding trouble will occur, so please take care this position.

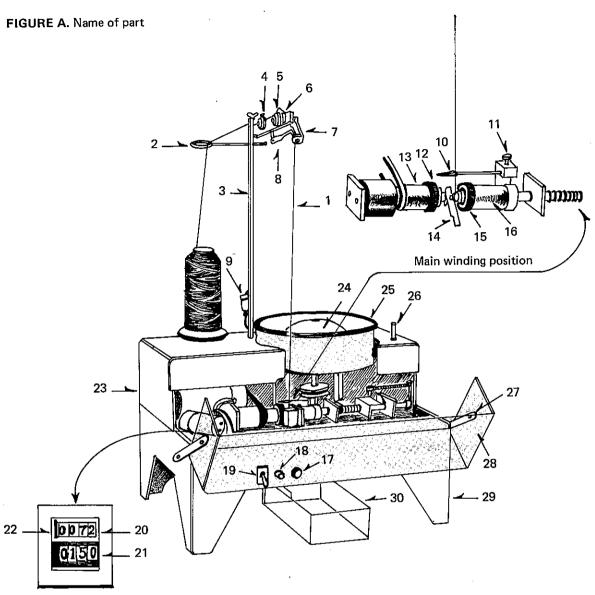
Secondly, set up the Thread Stand Plate on the machine as shown FIGURE D and connect the electric plug with socket equipped in the machine.

Next, please set the accessories bobbin box to the suitable position to stack up bobbins beyond the machine.

The Model F-117 is designed for the filled in bobbins are to be automatically stacked up one by one in a bobbin box.

When you are ready as above, plug in the electric cord to the wall outlet.





Digital auto-counter (Option)

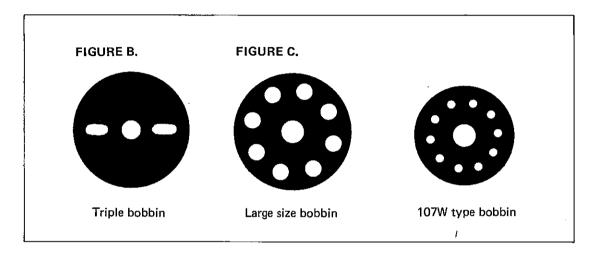
- 1. Thread
- 2. Large thread guide
- 3. Thread stand pole
- 4. Tension regulator (A)
- 5. Tension regulator (B)
- 6. Thread sensing limit wire
- 7. Small thread guide (B)
- 8. Thread regulating sinker
- 9. Plug socket
- 10. Thread retainer lever
- 11. Thread retainer lever adjusting screw
- 12. Main rotating disc packing
- 13. Main rotating disc
- 14. Thread winding volume adjusting lever with screw
- 15. Rotary disc packing

- 16. Rotary disc
- 17. Indication lamp (red)
- 18. Start button
- 19. Main switch
- 20. Bobbin winding digital counter
- 21. Preset counter
- 22. Counter reset button
- 23. Upper body
- 24. Plastic hopper cover for small size bobbin
- 25. Bobbin hopper
- 26. Bobbin hole tester
- 27. Acryl cover connecting plate
- 28. Acryl resin cover
- 29. Lower base
- 30. Accessory bobbin box

## 3. Important Note about the Bobbin Size

The standard style of ALPHA-MATE F-117 EXPORT Bobbin Winder is able to wind the thread for such bobbins, as HA, TA, DB, 400W, TC, 112W, HSM type (Double sized bobbin) and Triple bobbin (FIGURE B).

However, in case the winding for 107W type bobbins or the large sized bobbin as shown in the FIGURE C, place order special models.



## 4. The Correct Method of Putting Bobbins in the Hopper

The Model F-117 EXPORT can wind the thread smoothly on straight stitcher as well as special type bobbin.

However, in case you put various kind of bobbins together in the hopper, the bad condition will occur at the bobbin supply. Therefore, it is necessary to put bobbins in the Hopper by limiting in only one kind when you start running of machine.

In addition, there is the number to be admitted putting bobbins at a time in the hopper, such as the small size of bobbins is limited to 150 pcs and the large size is available up to 100pcs.

In case the number exceeds the limit, it will cause the machine trouble.

Remark: The Digital Auto-Counter for ALPHA-MATE F-117 EXPORT is equipped with the machine according to your request as option.

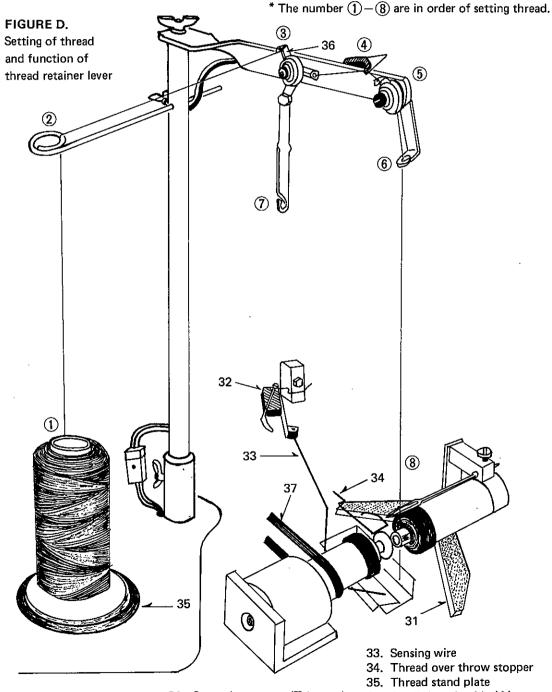
If you should purchase the machine without Auto-Counter, bobbins should be put in the hopper counting the number by yourself before winding. In this case, if bobbins and threads are run out, you can be informed by the alarm buzzer.

2

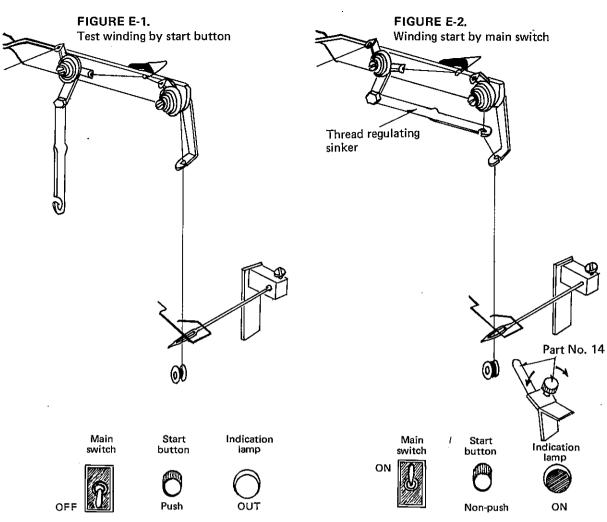
## 5. Setting of Thread in Good Order

The thread is necessary to be hung down vertically between the bobbin and the rotary packing. In this case, the thread retainer lever stands still drawing to the right side completely. As shown in the FIGURE D.

And, in case you find the thread cannot be wound to bobbins, loosen the screw of thread retainer lever and adjust the lever slightly to the left side. The thread will wind up to the bobbin by good condition.



- 31. Open-close cutter (Trimmer)
- 32. Safety appliance
- 36. Small thread guide (A)
- 37. Timing belt



<sup>\*</sup> After test winding finishes, set the thread regulating sinker on winding thread before making switch ON as shown in FIGURE E-2. By this setting, thread can be always hung down vertically to the winding part without any trouble.

### 6. How to Treat the Digital Auto-Counter Before Winding Operation

When you are ready as above, put the Reset Botton at the Auto-Counter and open the window of Preset Counter.

Then, to memory the preset number at the Auto-Counter and shut the window as before. Next, insert the accessary Bobbin Box in the bottom of this winder as shown in FIGURE A.

## 7. How to Start Winding

By this operation, you are ready to start running of machine, so by pressing the start button rightly as shown in FIGURE E-1, the bobbin will be led to the main winding position.

After you confirmed the thread wound up by operating of start button, turn on the main power switch and the indication lamp turn on the right as shown in FIGURE E-2, then the thread winding will be run automatically. And the filled-in bobbins are to be stacked up one by one in the bobbin box.

### 8. Treatment of Thread Winding Volume

In accordance with bobbin size and the kind of thread, the adjustment of thread winding volume is in need.

So, in case of the above mentioned, please adjust the screw of winding volume as shown in FIGURE E-2.

The turn clockwise becomes small volume, and the turn counterclockwise means large volume. Therefore, make sure to adjust the suitable position, because the machine trouble will be caused by extreme over-winding.

## 9. Note on Handling Digital Auto-Counter

If it should finish to wind up in as many bobbins as indicated in preset digital winder stops automatically. Draw bobbin box and use bobbins in it.

It means the complete finish of the first winding. In the case if you wind up in new preset number, changing the preset number inputted before, necessarily push the counter button of the digital counter, open the window of low step and input new preset number.

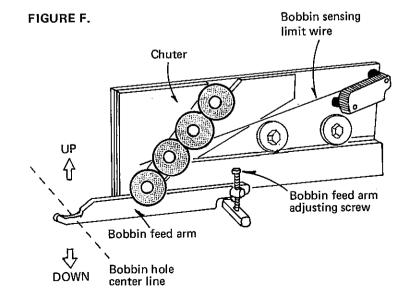
If you should not change the preset number, push the counter button. After giving back the figure in upper step to zero and begin to wind up.

On the way of winding up, if you should stop the winder, put the main switch OFF and it stops. When you run again, if you should change over to ON, winding up will be advanced again. In this case, it is not necessary to push the counter button.

#### 10. Bobbin Sensing Limit Wire and Feed Arm

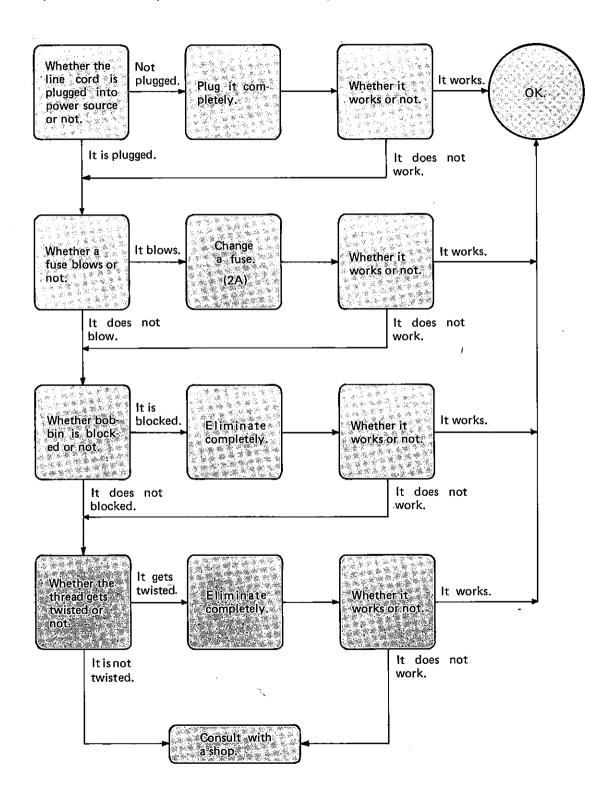
As shown in the FIGURE F, inside of bobbins which proceed to feed arm from hopper through chuter, a piano wire connected with limit switch is attached. This is a "Bobbin sensing limit wire". It is designed so that the winder stops if bobbins of hopper should be cleared and bobbins become not fed to this position. However, if the winder should stop suddenly, even if bobbins are put in, check whether this sensing wire is off out of bobbins. As shown in the FIGURE F, it is normal that inside of bobbins, sensing

wire is put in. If bobbin hole axis which is supplied to the winding position by bobbin feed arm should not be fixed, the bobbin presser which is located at the edge of rotary disc can not fix bobbins accurately. If bobbin hole center line should not fit to the position of bobbin presser, adjust the position of the feed arm by moving the bobbin feed arm adjusting screw in FIGURE F. Check it, if you should change sizes of bobbins.

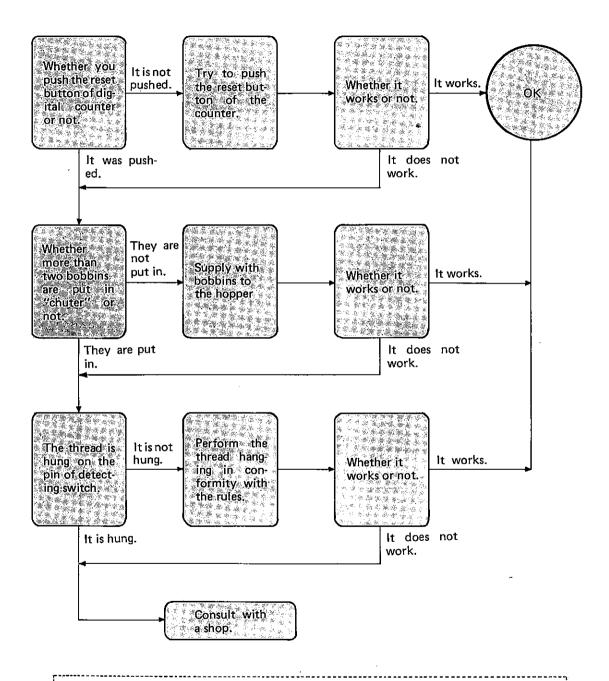


## Example of Troubles from the Viewpoint of Operation and Adjusting Way.

### A) It does not work, even if the start button is pushed.

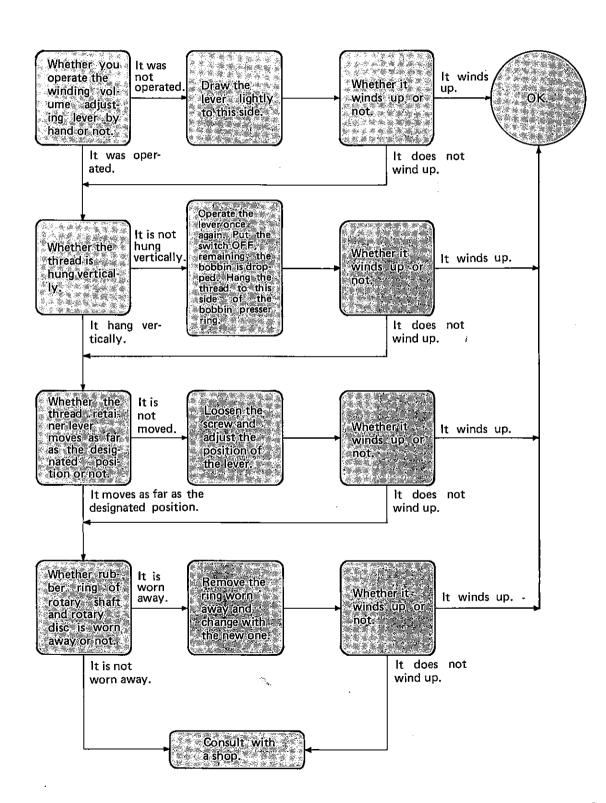


#### B) It does not work, even if main switch is ON.



Remark: Though high efficiency motor is used, if it runs successively for a long time without suspension, the extent of using up the motor is increased and it causes the machine trouble. After approximately two hours successive running, cease operation for a while and run again.

#### C) Though it works, it does not wind up.

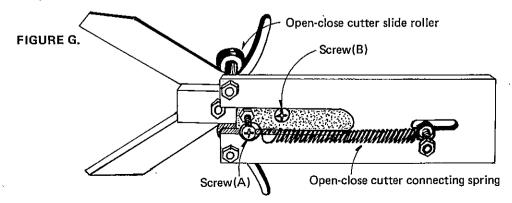


#### D) It winds up, however machine is not in order.

Trouble	Countermeasure and items verified
It winds up by halves and the operation turns to the next:	Is bobbin inferior or non-standardized? If the burr is not in the inside diameter. Unstableness of winding volume adjusting lever. Central axis of bobbin feeding lever is shifted.
The thread winds round the rotating mechanism.	Re-adjust the position of the thread retainer lever. The cutting quality of the open-close cutter (trimmer) is not good.
The thread is not cut.	Replace open-close cutter(trimmer).
The thread is cut in the course of winding.	Abrasion or burr of winding volume adjusting lever——Buffing or replacing with new one.
Bobbin is blocked.	Eliminated mixing in bobbin or margin remaining bobbin.
Bobbin do not run.	Hopper does not rotate.  Decrease the number of bobbins.
Bobbin slips.	If the inside of diameter of bobbin is small.

#### Matters Required Attention Especially before Winding.

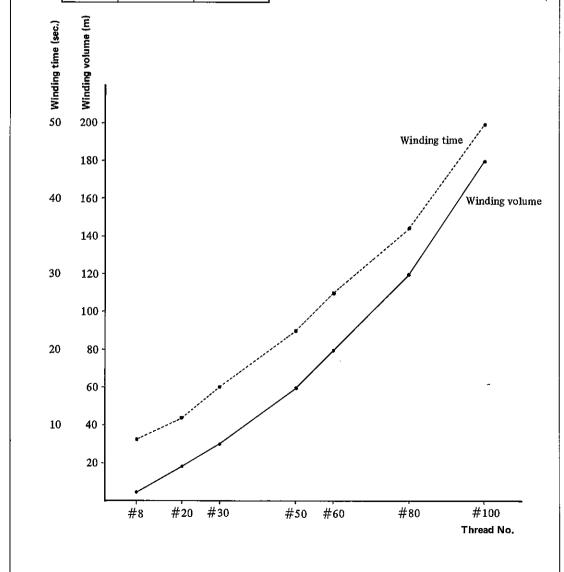
- 1. Be careful of the preset number in Auto-counter and inspect the function of limitswitch at the tension regulator before you start winding.
- 2. In case you put various kind of bobbins together in the hopper, it will be caused bad condition at bobbin supply. Make sure to classify bobbins in the hopper distinctly.
- 3. Do not insert your fingers at first hand in the position of Open-close thread cutter by means of dangerous.
  - So please use tweezers for handling thread and bobbins.
- 4. If you use defaced, warped or thread remained bobbins, the machine trouble will occur. So please inspect the bobbin by the Bobbin-hole Tester equipped with this winder
- 5. Take away the wasted thread which is adhered at the rotating mechanism.
- 6. Make sure to adjust the winding volume screw correctly, unless over-winding condition occur to bobbins.
- 7. If the Open-close Cutter become dull condition, change with new cutter.
- 8. When you use finest thread, please adjust the position of bar for tension regulator.
- 9. When the buzzer rings the machine will stop running automatically, so switch off the main switch. Inspect the trouble position. Put the machine in order and switch on again to start winding with safety. However, if the digital auto-counter (optional) is mounted on, the buzzer should ring when count out. In this case, operate the counter and switch on again.
  - (Refer to Page 13, "Alarm Buzzer sounds in the following case")
- 10. The newly designed Acryl Cover can be removed smoothly with ease, however, set this cover on the main rotating device in course of winding or putting bobbins in the hopper. If bobbins fall in during running, it will cause the machine trouble.
- 11. In case the winding double or large sized bobbins, take off the plastic hopper cover for small size bobbin (Part No. 24.), and put bobbins in the hopper.
- 12. How to interchange open-close cutter (Trimmer)
  - If you should interchange the open-close cutter, turn over the winder and remove the cutter spring first of all as shown in the FIGURE G. Secondly remove screw (A) and screw (B). Put the body back in its situation where it was. Fix the thread retainer lever in the position drawing to right side, using start button as shown in the FIGURE D. After that, take the cutter off the upper part and interchange for new cutter. When you mount new cutter, as shown in the FIGURE G, necessarily fix it so that the slide roller is brought into contact with the periphery of the cutter body.

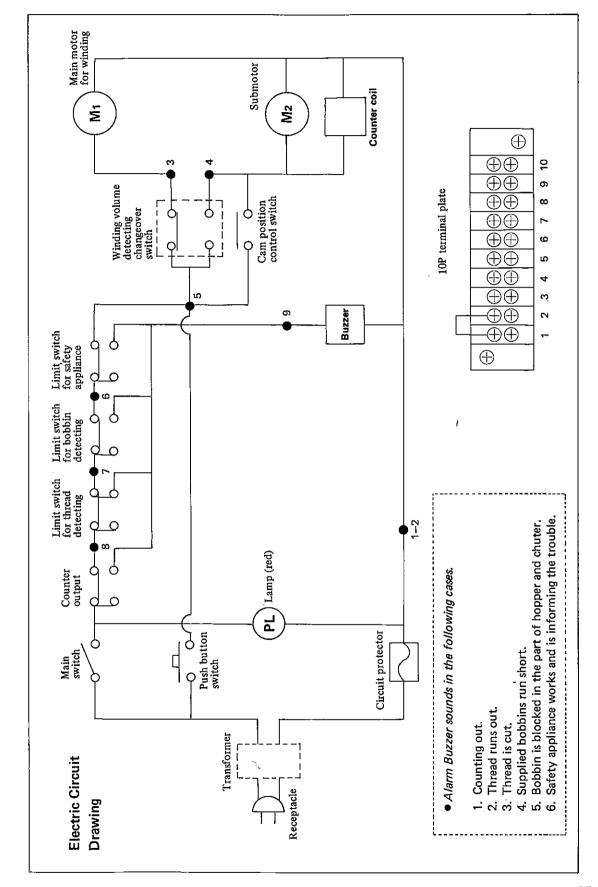


## F-117 Winding Data

Bobbin for Straight Stitcher Thread (Cotton, Spun) / 60Hz

Bobbin Thread No.	Winding time	Winding volume
#8	8 sec.	5 m
20	11	18
30	15	30
50	22	60
60	27	80
80	36	120
100	50	180







## TAIYO SEWING MACHINE IND. CO., LTD.

TOKYO JAPAN