

The World Best Mire Textile Bobbin

SINCE 1974

# MIRE BOBBIN

*The Company that constantly Develops and Researches high Quality.*



**MIRE BOBBIN**  
Textile Bobbin, Plastic Goods

## INTRODUCTION

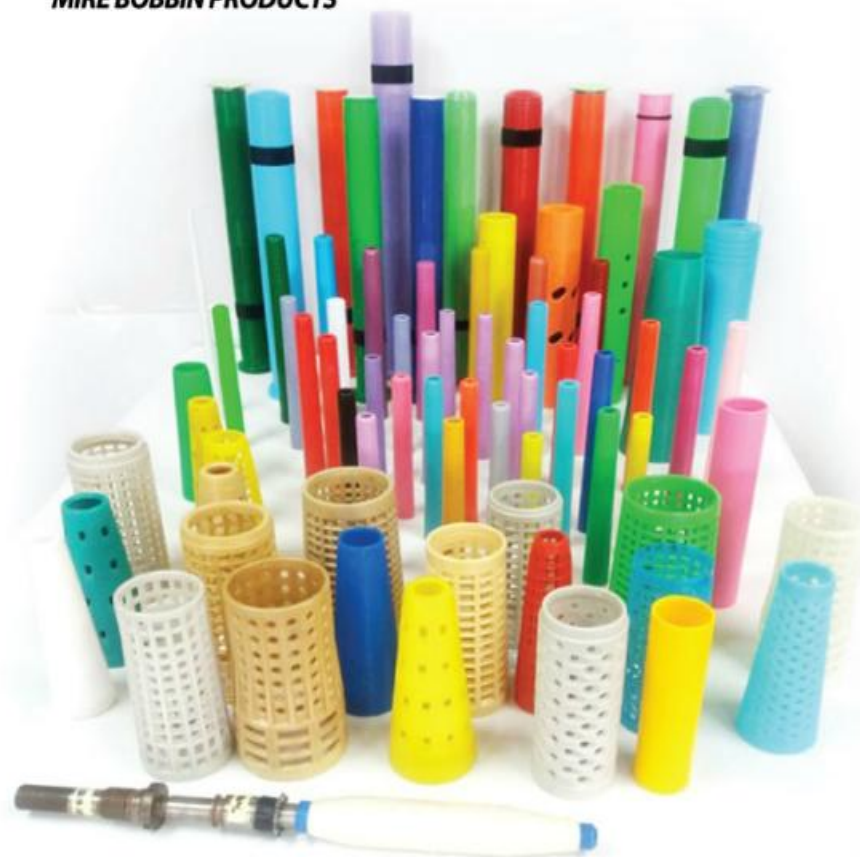
We, MIRE BOBBIN Co., has been founded in 1974 to produce plastic spinning Ring Bobbins and Roving Bobbins which using at the Domestic Spinning Factories. In the meantime, we could have achieved remarkable growth with good quality through develop a wide range of bobbins which proved to supplying to Domestic and Abroad Markets. In 2012, we developed ECO Bobbins to increase production while reducing power consumption, Labor Costs, Production Time. Currently our Patented ECO Bobbins sales to many Domestic Spinning factories as well as exporting to the World. We can say with confidence, in many Spinning Machine Makers currently using our products and recognized as superior products. Especially Toyota Spinning Machine factory of Japan import our products over the years. We will try to the development production and supply of New Products that customers desired, based on the accumulated technology and confidence of our customers. Also we will do best to supply high quality, fast delivery and competitive price with lowest vibration of Bobbins.

## COMPANY HISTORY

- ▶ In 1974 Founded DAEJIN CHEMICAL Co., Joint ventures with DAJIN JAPAN company
- ▶ In 1999 Founded MIRE BOBBIN Co.,
- ▶ Perfect Mold developed 1995
- ▶ In 1999 Flocking Bobbin Development (utility model register)
- ▶ Developed ECO Bobbin in 2012
- ▶ Developed Roving Bobbin fixing Pin in 2013
- ▶ Developed ECO-Tube in 2015
- ▶ Developed 12 holes and Embossing of Roving Bobbin in 2017



## MIRE BOBBIN PRODUCTS



Roving Bobbin workshop

Ring Bobbin workshop

Vibration Measuring Instrument and  
the gauges tools of various testing equipment

our reserve Molds

## RING BOBBINS

We are supplying to cotton, synthetic and worsted yarn to the Spinning Factories which producing with perfect mould for lowest Vibration.

- ▶ Best & Long Performance and lowest Vibration
- ▶ Best working at Auto-Doffing, Link Coner and Winding
- ▶ Anti-Shocking & Bending & Heating
- ▶ Micro grooves Surface
- ▶ Best Materials for various Demand and Conditions  
(PP, ABS, PC, PCG, PBT and special engineering Plastics)
- ▶ Presently we supplying to most of KOREA Spinning Factories and  
JAPAN, USA, INDONESIA, THAILAND, PAKISTAN, VIETNAM
- ▶ Available maker's for TOYOTA, RIETER, ZINSER, HOWA, CHINESE Frames mainly



## PERFECT MOLD

Our products are much different and superior quality which compared to the other companies Bobbins. We developed in **ONE PERFECT MOLD** that is the seamless surface mold. Thus we are producing clean surface Bobbin which has no vertical seams



- ▶ But other companies Bobbins created with jointed 2 molds that products arise 2 vertical lines of both sides on the Bobbin surface. Then these products will be dislocated each other, occur inaccuracy of the dimensions (0.2mm) of the inner and outer Core of the vibration to the spindle.

## Introduction of our Roving Bobbin Bush and Ring Bobbin Bush



Our Super Enpra Bush : Heat Distortion Temperature of 250degrees, the best Abrasion Resistance. When dropping to the floor of desk, our Bush produces a metallic sound.  
Normal Bush: Using the material EPOXY or PCG 20% + Mineral → Weak abrasion resistance. The National Environmental Standards unusable Epoxy material because Phenolic components. That Phenol ingredient is coming from an Epoxy material which causes a chemical reaction to the raw material of Plastic Glass Bobbin that chemical reaction will creates the Crack even minor shocks at a Bush of Bobbin then Bobbin will be broken after used 1~2years.  
To complement this point we use the material Super Enpra which is long life(appx, 5years) and strong more than EPOXY. Super Enpra is containing Aluminum components Plastic material which used in Aircraft engines.

## ECO RING BOBBINS

We are developing new type of Bobbins ECO series, as per demand of for higher production efficiency of Spinning Frames.

Characteristics of the ECO Bobbins are especially highest Capacity, lowest Energy and fastest RPM (upto 25,000RPM) of Bobbins. - Customers can get quantity(24% more than compare to normal bobbin) of Yarn at one Bobbin(less Doffing & saving Time) and reduce 3.2% Electric Charge, thanks to the lightest(24~30% less than normal Bobbin) and thinnest of ECO Bobbins.

- ▶ One per Cop can winding a higher quantity Yarn (increased 10~25% in full Operation 24hours produced in 50,000 Spindles) that can be reduced the Labor and Power Costs.
- ▶ We confirmed through our Korean factories that has not problem in Auto & Manual Doffing and Link Corner. Available for Toyota 180, 210, 230mm, Zinser 180, 200mm, Rieter 190, 200, 210mm and Howa 210, 235mm
- ▶ We made with an expensive special Law Materials(PC+Glass+Mineral+Other) to good strength to withstand these capabilities.



## BENEFITS OF USING ECO RING BOBBINS

Buyer can be able to increased productivity just replace the Bobbins without changing an expensive Ring and Spindle. Hence one Cop could be winding the yarn increased by 10~25%. And through a long time winding, the Yarn will be reduced the knot therefore it might be increased the counts of drum and will be reduced counts of doffing then will get an energy savings effect.

1. One per cop can winding a higher quantity Yarn that is labor and Power costs are reduced as a result of the decline to supply and recovery Cop by the worker therefore customer will be saved the labor costs and electricity costs.
2. The electricity savings when empty bobbin operating will be reduced machine load
3. We confirmed that has not problem in Manual doffing & Link Corner.  
-Available for Toyota 180, 210, 230mm, Howa 210, 235mm and Zinser 180, 200, 230mm and Rieter 190, 200, 210mm.

Welcome your new demand of developing for any types so we can give best recommendation as per buyer's spinning conditions.

Details	Normal Bobbin	ECO Bobbin	Remarks
Power Capacity(KW)	2.538	2.481	-57
Used amount(US \$)	1,260,000.00	1,231,666.00	-2.3
Used Air Consumption(N Liter)	1,990,950	1,905,567	-4.3
Used Amount(US \$)	253,333.00	242,500.00	-10.833
Expected Savings(US \$)		3,950.00	Payback Period
Investment Amounts		4,250.00	1year 1month

\*This data was calculated with the following criteria and based on the Korea electricity using price

\*Expected increase of 1 cop : 24%

\*If full operation 24 hours produced in 50,000 spindles, the production will be increased 5% that to be big helpful for increased production.

\*Increased production figures takes via simply our company measurement according to the thickness for the Bobbin, the yield increment as a comparison value maybe the figures will get difference according to the thickness of the yarn and the production methods.

\*The Yarn will be reduced the knot therefore it might be increased the counts of drum and will be reduced counts of doffing then will get an Energy savings effect.

\*When winding the Yarn on the Spinning Machine Which can be able to wind 24% more than the normal bobbin also 3.2% Electricity savings.

#### 1. TOYOTA 180mm

Details	Normal Bobbin	ECO Bobbin	Difference
Weight	40g	26g	-14g
Bottom out dia	24.4mm	21.4mm	-3.0mm
Middle Section Out Dia	21.1mm	20.3mm	-0.8mm
Section of Gripper catch Out dia	19.1mm	19.1mm	-0.0mm

#### 2. TOYOTA 210mm

Details	Normal Bobbin	ECO Bobbin	Difference
Weight	51g	41g	-10g
Bottom out dia	25.8mm	23.3mm	-2.5mm
Middle Section Out Dia	24.0mm	21.9mm	-2.1mm
Section of Gripper catch Out dia	21.0mm	20.8mm	-0.2mm

#### 3. TOYOTA 230mm

Details	Normal Bobbin	ECO Bobbin	Difference
Weight	58g	42g	-16g
Bottom out dia	26mm	23.5mm	-2.5mm
Middle Section Out Dia	24.0mm	21.9mm	-2.1mm
Section of Gripper catch Out dia	21.0mm	20.7mm	-0.3mm

#### 4. RIETER 190mm

Details	Normal Bobbin	ECO Bobbin	Difference
Weight	39g	29g	-10g
Bottom out dia	23.4mm	22mm	-1.4mm
Middle Section Out Dia	21.6mm	20.8mm	-0.8mm
Section of Gripper catch Out dia	20.1mm	19.5mm	-0.6mm

#### 5. RIETER 200mm

Details	Normal Bobbin	ECO Bobbin	Difference
Weight	46g	34g	-12g
Bottom out dia	23.2mm	21.9mm	-1.3mm
Middle Section Out Dia	21.8mm	20.7mm	-1.1mm
Section of Gripper catch Out dia	20.3mm	19.6mm	-0.7mm

#### 6. RIETER 210mm

Details	Normal Bobbin	ECO Bobbin	Difference
Weight	45g	35g	-10g
Bottom out dia	23.4mm	22mm	-1.4mm
Middle Section Out Dia	21.7mm	20.9mm	-0.8mm
Section of Gripper catch Out dia	20.1mm	19.5mm	-0.6mm

#### 7. ZINZER 180mm

Details	Normal Bobbin	ECO Bobbin	Difference
Weight	38g	29g	-9g
Bottom out dia	24.3mm	22.1mm	-2.2mm
Middle Section Out Dia	22.1mm	20.9mm	-1.2mm
Section of Gripper catch Out dia	19.5mm	19.5mm	-0.0mm

#### 8. ZINZER 200mm

Details	Normal Bobbin	ECO Bobbin	Difference
Weight	44g	35g	-9g
Bottom out dia	24.3mm	21.5mm	-2.8mm
Middle Section Out Dia	21.9mm	20.5mm	-1.4mm
Section of Gripper catch Out dia	19.5mm	19.5mm	-0.0mm

#### 9. ZINZER 230mm

Details	Normal Bobbin	ECO Bobbin	Difference
Weight	58g	42g	-16g
Bottom out dia	26mm	23.5mm	-2.5mm
Middle Section Out Dia	24.0mm	21.9mm	-2.1mm
Section of Gripper catch Out dia	21.0mm	20.7mm	-0.3mm

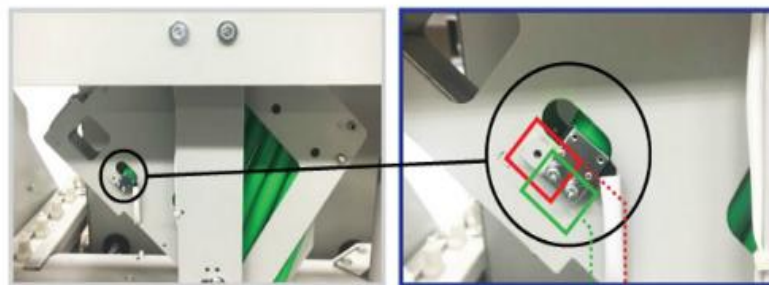
#### 10. HOWA 210mm

Details	Normal Bobbin	ECO Bobbin	Difference
Weight	51g(ABS), 55g(PC.G)	38g(ABS), 41g(PC.G)	-14g
Bottom out dia	27.3mm	24.5mm	-2.8mm
Middle Section Out Dia	24.4mm	23.3mm	-1.1mm
Section of Gripper catch Out dia	21.9mm	22.0mm	-0.1mm

#### 11. HOWA 235mm

Details	Normal Bobbin	ECO Bobbin	Difference
Weight	60g(ABS)-For Normal, 68g(PC.G)-For Setting	52g(PC.G)-For Setting	-8g, -16g
Bottom out dia	27.9mm	24.9mm	-3mm
Middle Section Out Dia	24.9mm	23.6mm	-1.3mm
Section of Gripper catch Out dia	22.0mm	22.0mm	-0.0mm

## TRIAL THE MIRE ECO BOBBIN INTO THE LATEST TOYOTA TBC TYPE



The sensor is fixed this screw at MIRE BOBBIN.

The sensor is fixed this screw at normal bobbin.



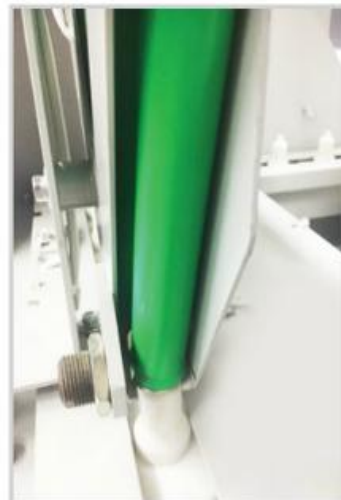
TBC BOBBIN detection sensor (one in front and one behind)  
Light passes through gap between ECO Bobbin, sometimes it does not detect and error occurs.

Workaround (any way, adjust the Sensor so that the Sensor's light will detect the Bobbin)

1. Unscrew the Front and Rear Sensors to adjust their position diagonally  
(Front Sensor to Right as far as possible, Rear Sensor to Left as far as possible)

2. Adjust the position to down of the Front Sensor so that it detects the Ring part of the Bobbin.

(Remove the welded part and make the hole of the steel plate larger, Sensor position should be adjusted down and then fixed)



TBC runs with no problem in this area.

## Yarn Lock

- Yarn Lock is useful for Murata Winder's Link Coner or Bobbin Tray type.
- At the Winder, find the end of Yarn which is in the inner diameter of the upper end of the bobbin and untie the Yarn



In winder, without Yarn Lock Bobbin is difficult to find the end of the Bobbin Yarn. so in this case that will come out again with unwind Yarn Bobbin  
(General Bobbin)

In winder, the Yarn Lock bobbin is easy to find the end of the yarn. So the bobbin could be came out in state of yarn released all.  
(Yarn Lock Bobbin)



This is our own unique technology for the Murata Winder.

When the Yarn tail went into the Bobbin at the Murata Winder which do not being sucked while the Tray driving. When too long untied Yarn tail went into the Bobbin, it also prevents problems which entangled Yarn at the Conveyor Belts and the other Machinery.

## ROVING (SIMPLEX) BOBBINS

Our Roving Bobbins are easy Doffing & easy carrying with Bobbins Holders and that Bobbins are good balancing for best Performance.  
We use best Materials for durability and longer life.  
Available for TOYOTA, HOWA, ZINSER, RIETER, CHINA Roving Machine Makers...



## ROVING(SIMPLEX) BOBBINS

Roving bobbins are attached black cloth on the bobbin.  
Sometimes have a problem that the black cloth will detached during the using.  
To prevent this, we has devised a utility model patent(Registration 20-0476531-00-00) that equipped with plastic fixing pin on product.



Wide Bush

Normal Bush

Wide Bush



Deep groove

Top part

Bottom part



### Wide Bush

The upper end of the Bobbin has made a wider bush, the roving spindle could be easier inserted and also it easier for the operator to insert into the Bobbin holder.

### Deep groove

A slippery polyester yarn slides on the surface when wound on a normal groove, and the formation of the yarn layer is broken. To prevent this phenomenon, use deep groove.

## 12HOLES FOR TOYOTA ROVING MACHINE

We are developed a new 12 Holes Bush of Roving Bobbin which Comprised for stable and precise positioning in the Bottom Gear without any additional work by the operator. refer to attached photos a bush shape of the New Mold which come out more then excellent Roving product.



▲ 8 hole



▲ 12 hole



The 12holes gray Bobbin is 100% stable enter to the bottom gear.  
Pink Bobbin is 8 holes, so sometimes it does not enter the bottom gear. Refer to pink color photo. ▲

### About Embossing,

This new Embossing product applies only to the Toyota FRD Bobbin(Auto). Roving bobbin there are some cases where the end of the slave winding around the end of the spinning yarn is running down, which compensates for such a drawbacks.



## DYEING TUBES AND CONS

We are supplying dyeing tube and Winding Cones as per Buyer's Conditions. Our Dyeing Bobbin has developed With Special Dye Material is that does not penetrate into the day during dyeing Bobbin. When worker doing to dyeing process, out Dyeing Bobbins are possible to day without to wash & covering the non-woven fabric each time.



Our Dyeing Tube can be endured at a water temperature of 130°~150° for 3 hours or longer, there is no change in the color of the Dye Tube.

This Technology has only in Italy and ours all over the world.  
We made by Royal Material so the color does not changed after dyed. Also it can be reused without any processing when reuse after use.

If the Customer requested, made in cheap materials by PP+G30% or by PP then color will be changed after dyed. Moreover made by this materials, should be dyed by covering with non-woven fabric after washing for reuse.

This product is very different in price depending on size.  
First, we need to know the Inner Diameter, Outer Diameter, and Length of the Top and Bottom of the Dye Tube customer are using.

If the Customer do not consider the quality and required very cheap Day Tube, in which case we can make with cheap materials, but the color not guarantee.

## ECO TUBE

Electricity-saving plastic tube of a new concept

### Product introduction

#### What is ECO Tube?

- ▶ The Plastic Tubes are made to complement the disadvantages of the existing Paper Tube that you are using.
- ▶ Composed of specially designed structures.  
(Registered design 30-0833052-00-00)
- ▶ The same price with the paper tube

### Comparison of an existing paper Tube and ECO Tube

Item	Existing paper tube weight	Eco tube Weight	Difference
3'30" -178mm	32g	20g	12g
4'20" -170mm	41g	27g	14g
4'20" -176mm	42g	28g	14g
5'57" -176mm	40g	25g	15g

### DISADVANTAGE OF THE PAPER TUBE



- 01 Without the Hole, can't well setting.
- 02 Color Distinction is not clear.
- 03 Dimensins is incorrect.
- 04 Difficult to reuse.

## BENEFITS OF ECO TUBES

- ▶ In the surface have the Holes.  
-That can be lowered Pressure Setting when the setting.  
-Setting is fine.
- ▶ This Product is light weight.  
-the Electricity savings.  
-It is easy to handle for the operator.  
-Reduced Winder load when operating.
- ▶ Could be gained an accurate Dimensions and Shape because of made with Plastic material Products.  
-Less bearing wear in Winder by the dimensional accuracy.  
-It's not bounce off when the Winder faster operating.
- ▶ Strong to external impact that can be reused when handling being dropped.
- ▶ Paper Tube could be changed the Dimension and Strength because the Moisture during the rainy season. However, plastic has no deformed of Dimensions or Strength by Anti- Humidity.
- ▶ Can be to re-use according to recovery.
- ▶ The Projections in the product surface are play a role until the end Yarn is cleanly unwound.
- ▶ Color Classification is clearer than a Paper Tube.
- ▶ Optionally, a BIOCID and a FUNGICIDE is added to the plastic material, so the wound yarn on the ECO TUBES are available ANTIMICROBIAL properties, and may be less causing FUNGUS.
- ▶ The wound yarn on ECO TUBE could be seeing elegance.



▶ WA(8:2) 1/40's, 2kg/Cone

## BOBBIN OF KAMITSU WINDER

### Disadvantages of FRP Bobbin in use :

1. FRP bobbin is not dimensioned correctly.
2. Weight is heavy (2500g)
3. It's expensive.

### Disadvantages of existing Paper Tube Bobbin :

1. Disposable paper tube have a limit of only one time use.
2. The dimensions are not correct,
3. Strength is weak

### Plastic Bobbin:

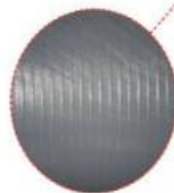
It compensates these shortcomings and makes the Mold by Plastic Injection.  
The materials are composed of Polycarbonate + Glass 10%.  
There are many Advantages of Plastic Bobbin as follow :

1. Accurate in size
2. Light in weight (1,500g)
3. The price will be in 70% of FRP Bobbin.

### REMARK

It is a bobbin that winds Carbon Fiber at Ulsan factory of Taekwang Industry.

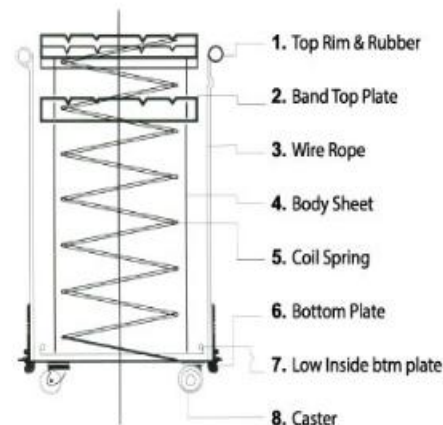
- ▶ Capacity: 500kg will be wound.
- ▶ Usage: Nylon Fiber, PE Fiber and Carbon Fiber of Spinning factory
- ▶ Domestic usage: Hyosung, Kolon, Taekwang Industry
- ▶ Japan: Toray (The World's largest producer of Carbon Fiber)



Bobbin for Carbon Fiber

Length : 820mm  
O.D. : 160mm  
I.D. : 140mm

We are supplying Silver "Cans" for Carding, Drawing and Yarn Dyeing as per buyer's request.  
We are using HDPE and fiber Sheet.



# COLOR CHART



MIRE BOBBIN

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**MIRE BOBBIN** Textile Bobbin, Plastic Goods

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