

## Table of Contents

I. Application Note.....	2
II.Important Alert.....	3
III. Technical Parameter.....	4
IV. Machine Installation.....	5
V. Machine Operation.....	6
VI. Troubleshooting .....	12
VII. List of Main Spare Parts.....	14

### Reference Picture:



## **I. Application Note**

This machine can be used to conduct relatively closed packaging for different dimensions of steel wires or coiled unpackaged objects so as to play a role of anti-rust, waterproof, dustproof, anti-damage and anti-aging etc..

The packaging material mating with this machine is of compound packaging paper tape or high-quality compound knit packing tape.

## II. Important Alert

- I. Abuse will lead to serious result.
- II. Do have the machine grounded.
- III. In the event of urgent failure occurrence, do shut off or cut off power supply, and then carry out relevant troubleshooting operations after safety confirmation.
- IV. Never modify the control program and relevant parameter settings of this machine without authorization.
- V. Never tear off various signs marked on the machine.
- VI. Never open the electrical box when the machine is working.
- VII. In the case of the lifting and lowering of unpackaged object, do ensure safe, steady and orderly operation, and unpackaged object's collision with the machine shall be strictly forbidden.
- VIII. Do Uninterrupted monitoring by operator when the machine is working. Avoid packing object deflection at wrapping process.

## III. Technical Parameter

Model	FPS-200	FPS-300	FPS-400	FPS-500
Coil OD	800-1000	800-1100	800-1200	800-1400mm

## FPS-200/300/400/500Coil Wrapping Machine

Coil ID	508/610	508/610	508/610	508/610
Coil width	50-200mm	100-300mm	150-400mm	150-500mm
Coil weight	100-700kg	100-800kg	100-1000kg	100-1200kg
Roller speed	2-4m/min	2-4m/min	2-4m/min	2-4m/min
Rotating speed	40-90 r/min	40-90 r/min	40-90 r/min	40-90 r/min
Wrapping material	LLDPE/PE/PAPER/PVC/	LLDPE/PE/PAPER/PVC/	LLDPE/PE/PAPER/PVC/	LLDPE/PE/PAPER/PVC/
Material width	70-120mm	90-130mm	100-150mm	110-150mm
Material OD	100-300mm	100-300mm	100-300mm	100-300mm
Material ID	50mm	50mm	50mm	50mm
Power output	App. 2.5kw	App. 3kw	App. 4kw	App. 4.5kw
Power voltage	380V/50Hz	380V/50Hz	380V/50Hz	380V/50Hz
Wrapping speed	15-30sec/pcs	20-40sec/pcs	30-50sec/pcs	30-55sec/pcs
Overlapping rate	20%-90%	20%-90%	20%-90%	20%-90%
Air Supply	5-7Bar	5-7Bar	5-7Bar	5-7Bar

## IV. Machine Installation

1. This machine is composed of main engine, cutter/tape wheel support and electrical box, etc.
2. Place the main machine on the ground surface horizontally and then assemble the above-mentioned spare parts at proper position. And then install some small auxiliaries.

3. Prevent against the occurrence of bruise, compression injury, crushing injury, contusion and other accidents during the installation.
4. As the machine has been transported and moved, all flexible shall be inspected carefully.
5. The entire installation shall be completed under the condition that the power supply is cut off.
6. The machine shall be mounted on flat and hard ground, where the ground load should be more than 1t/ m<sup>2</sup>. The power supply should be in accordance with written in the nameplate.
7. Only trained personnel can be allowed to enter the installation site.
8. Next working procedure can be executed only after all the installation operations are completed.
9. The machine shall be mounted in dry and dust free environment.

## **V. Machine operation**

### **1) Introduction to operating panel and switch function:**

**POWER:** The main switch of machine power supply which is used to connect or shut off the machine power supply.

**EMERGENCY STOP:** The control switch which is used to control circuit.  
Press this switch to shut down the whole machine in the case of emergency.

**MANUAL/AUTO:** The working mode of this machine is classified into manual operating mode and automatic operating mode. “MANUAL” mode is generally used for inspection, adjustment, troubleshooting and specific conditions. In normal operation conditions, “AUTO” mode is adopted.

**RING START:** It is usually used as startup button in “AUTO” mode. Press the button to make the ring work in “Manual”mode.

**RING STOP:** It is used to stop the machine in “AUTO” mode. Press the button to make the ring stopped in “MANUAL” mode.

**RING RESET:** It is used to have the ring reset. This button is operated in both “AUTO” and “MANUAL” mode.

**RING DOTTING:** It is used to have the ring run slowly in “MANUAL” and “AUTO” modes. And ensure ring can get through the center of the packing object.

**CUTTER:** It is used to cut the packaging tape. It is operated in both “AUTO” and “MANUAL” mode

**ROLLER RUNNING (ANTICLOCKWISE/CLOCKWISE) :** It shall be used to put the roller under clockwise or anticlockwise

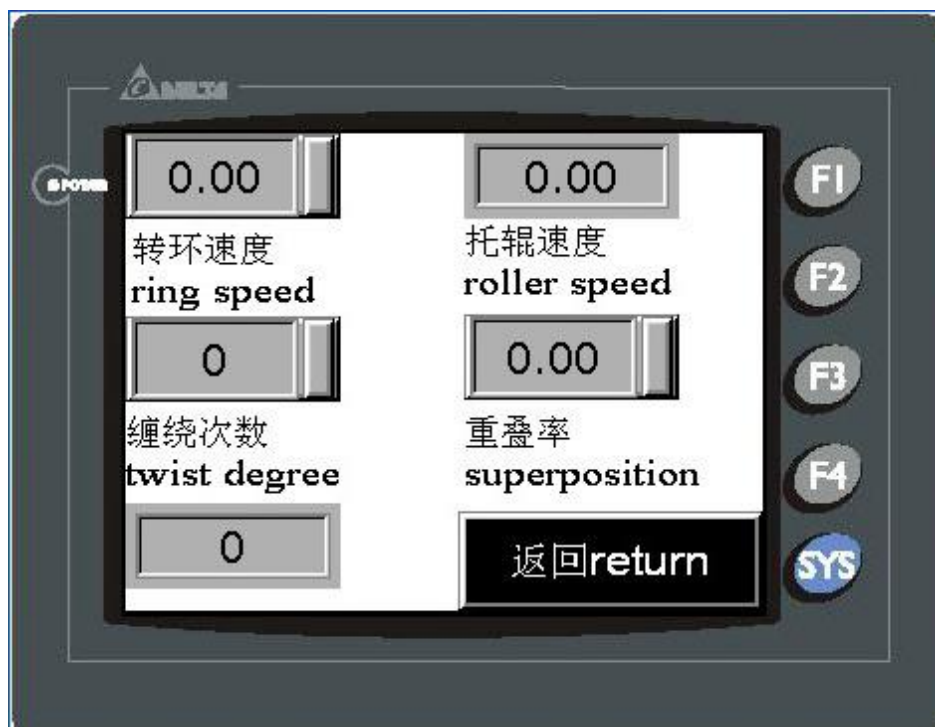
under running status when “MANUAL” mode is selected. The switch is invalid in “AUTO” mode & it shall be under “OFF” status in “AUTO” mode.

Cylinder Fwd. : Object be hoisted and come out from working position。

Cylinder Rev.: Device withdraws for putting packing object in working position.

## 2).Introduction to Main Content of HMI

### 1. “WRAPPING MODE” setting page



Note:

Ring speed: It decides to the running Frequency of the running ring. Range: 0-60Hz

Roller speed: It decides to the running Frequency of the running roller. Range: 0-60Hz

Superposition: It displays the overlap rate of the packing tape.

Note: After “Ring Speed” and “Superposition” set, “Roller speed” will automatic generation. Therefore “Roller speed” is just a display number.

“Twist degree”: “1” means packing finished once.

“2” means packing be divided into two times. This situation need packing two times when width and diameter of unpacked is large, packing tape on storing wheel is not enough for once packing.

### 1. Wrapping Mode

Ring speed  .....range 0~60HZ

Support  .....range 0~60HZ

roller speed

{ Wrapping process completed  
once

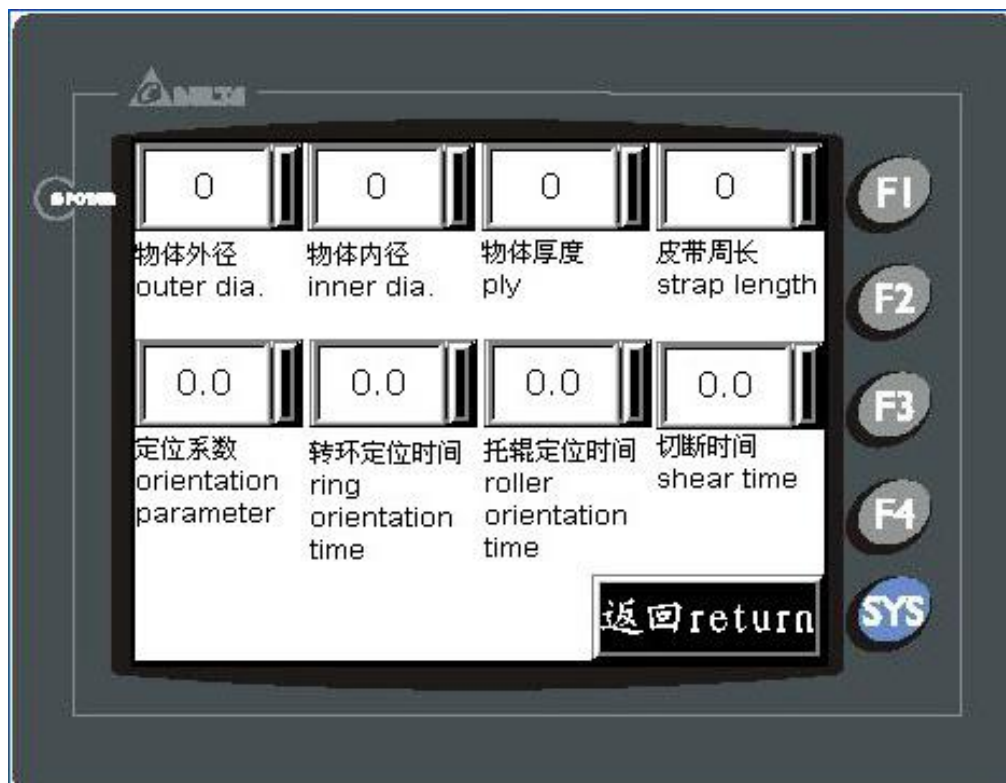
{ Wrapping process completed



twice.It's suitable for Big  
Packing Object.

Note: • “Ring speed” and “Roller speed” not only define the running speed of ring and roller respectively, but are also in connection with the overlapping of packaging tape. The two setting parameters can be set by touching. If the ring speed is high and roller speed is low, the packaging tape features a large overlapping range; on the contrary, the overlapping range is small.

## 2. Parameter setting



OD	Range 0~1100	..... As requirement,Unit/mm
ID	Range 0~1000	..... As requirement,Unit/mm
Width	Range 0~450	..... As requirement,Unit/mm
Strap perimeter		.....Been setted before leave factory,Unit/mm
Location Coefficient	Range-9~9	PLC can cut down packing tape automaticly.This parameter should be modify as specific element,such as dimension of object,Stretching coefficient of packing tape...
Ring Location Time	Range 0~20	That's the subsequent rotational time after basic ring action done for ensuring packing tape exhausted on the tape storage wheel.
Suppotive roller Location Time	Range 0~20	That's the subsequent rotational time after baise action of suppotive roller done for adhesive packing material in right position.
Cutting Time	Range 0.1~3	..... Time of cut down packing tape

### 3).Operation

1. Rotate the “POWER” switch clockwise to connect to the power supply of the machine.
2. Rotate the “EMERGENCY STOP” switch clockwise. At this time, the indicator lamp on the top of electrical box is“on”.
3. Turn the “MANUAL/AUTO” switch on the operating panel to “AUTO” position, and then the machine will work in automatic mode. Operate HMI, select and set the options one by one and make confirmation.
4. Put packing object on the center of working position.
5. Operate the “ RING DOTTING” button to have ring running slowly. Ensure the ring can position at the center or smoothly thread

through the inner diameter of unpackaged object. If the deviation is too much, the “BASE BOARD UP” or “BASE BOARD DOWN” button can be operated to adjust the horizontal level of ring.

6. Operate the PROTECTIVE ROLLER manually to have the unpackaged object protected by the down protective roller effectively.
7. Tape-Threading and adhesive on object.
8. Press the “RING START” button to have the machine run in automatic manner until one complete packaging is finished.
9. After ring restoration, press “Cylinger Fwd” move out Packing object. Start next new packaging operation according to the above-mentioned operating process.

## VI. Troubleshooting

Problem	Possible cause & solution
I. The complete machine doesn't work.	1. Check external power supply and air supply.
II. The ring doesn't rotate or rotates abnormally.	1. Check the wear of friction wheel. If it is seriously worn, new friction wheel shall be replaced. 2. Adjust the friction wheel. 3. Check whether any packaging tape is clipped into the friction pulley track.
III. Packaging tape is too loose or tight.	1. Adjust the force of tension belt.

<p>IV. The ring and roller don't work.</p>	<ol style="list-style-type: none"> <li>1. Check power supply.</li> <li>2. Check whether the parameter values of “ring speed” and “roller speed” in the wrapping mode setting page are properly set.</li> </ol>
<p>V. The machine shuts down suddenly, alarm lamp flashes and HMI pops up relevant information.</p>	<ol style="list-style-type: none"> <li>1. Check corresponding motor and connecting wire according to the prompt of HMI.</li> </ol>
<p>VI. Packaging tape is multi-folded.</p>	<ol style="list-style-type: none"> <li>1. Check whether the feeding route of packaging tape is on one straight line.</li> <li>2. Check whether the tape storing wheel on the ring is damaged.</li> <li>3. High-quality packaging tape shall be replaced.</li> <li>4. As too many tapes are stored on the tape storing wheel, “twice wrapping” shall be needed.</li> </ol>
<p>VII. The overlapping degree of packaging tape cannot be adjusted.</p>	<ol style="list-style-type: none"> <li>1. Check whether the parameter values of “ring speed” and “roller speed” are in consistent with the value displayed on the frequency converter in electrical box. If inconsistent, please check the communication line between the HMI and frequency converter.</li> </ol>

## VII. List of Main Spare Parts

Description	Part Number	Brand	Remark
PLC	DVP32ES00R2	DELTA	
Frequency converter	Frequency converter of ring VFD037M43B Frequency converter of roller VFD007M43B		
HMI	DOP-57GS		

FPS-200/300/400/500Coil Wrapping Machine

Ring motor	ZL28-0.75-5S-DC24V	YK	
Roller motor	ZF-22-0.1-300S	YK	
cylinder	SI100x150		
Air treatment	BFC2000		
solenoid valve	4V430C-15-DC24V 4V230C-08-DC24V		
Large friction wheel	FP-H-M-D		Factory standard
Small friction wheel	FP-H-M-X		Factory standard
Tension belt	FP-H-P		Factory standard
Cutter	FP-H-D		Factory standard
Tape storing wheel	FP-H-L-02		Factory standard
Fuse	4A		Standard

