CP1246 Coiling Machine

Technical Specifications and Quotation Sheet

Product name	Specification	Quantity	Price (USD) FOB Shanghai
CP1246 Coiling machine	CP1246	1 unit	

A. Machine characteristics

1. Direct connection to the extruder machine or the pay-off rack.
2. User-friendly touch screen control interface.
3. More efficient wire arranging and better-looking coils achieved by the Servo motor spinning system.
4. The function of the automatic error detection giving out signals to alarm the operator.
5. 99 coil specifications stored in the micro-computer.
6. Easy achievement of product specification change without any adjustment of the mechanical structure.

B. Application

Horizontal coiling connected to extruder machine or the pay-off rack. The procedure includes meter counting, wire feeding, taking-up, wire cutting after the coiling and moving the coil to the operation table, etc.

C. Components

1. Meter counting

2. Wire feeding

3. Door type cutter

4. Coiler head and wire spoon

5. Wire arranging system

6. Wire holding unit

D. Component descriptions

1. Meter counting

Both the upper and the lower wheels use precise encoders to count the length even to centimeter. The wheels are made of aluminum alloy, with the upper one hardened by the porcelain spray and the lower one covered with PU in order not to do harm to the wire. One way bearings are installed to prevent wire from moving reversely. The precision of meter counting is ±3 / 1000.

2. **Coiler head**

   The paying-off and taking-up of the horizontal coiling is automatically controlled by the air pressure propeller. When the coiling of the preset length is finished, the coiling will stop automatically. At the same time the coiling head will contract and goes up vertically and thus avoid wire head pinching and wire adhesion.

   The specification of the coiling head is fixed, ranging from ψ135mm ～ ψ220mm. The buyer is supposed to specify the demand.

   To change the coil inner diameter, you can simply change the specification of the coiler head. The Far East Cable Factory uses that of Φ135mm.

3. **Wire arranging system**

   The computer controlled wire arranging system, with ball screw driven by Mitsubishi Servo motor and with precise encoders receiving the operating signals of the main motor, achieves the synchronizing movement of the servo motor and the main motor, with a more efficient wire arranging and better-looking coils.

4. **Cutter**

   The Door type cutter cuts the wire automatically when the coiling of the preset length is finished. The double cutter, made of special steel SKD-11 and heat treated in vacuum, does a good cutting with its hardness and duration.

5. **Wire holding unit**

   Upon the coiling of the wire, the wire holding unit will hold the coil and deliver it to the packaging table.

6. **Control panel**

   The touch screen control interface is user-friendly. The coiling speed, coiling length, warning system, speed regulation, signal lights, E-stop and resetting are all be controlled by the central computer control system. 99 coil specifications are stored in the micro-computer and data such as wire length, wire diameter and wire speed can undergo adjustment during the operation. That saves a lot of inconveniences and the wire speed and length and the whole machine operation ca be observed on the screen.

7. **Motor**

   Coiling system: 7.5HP AC inverter motor + 7.5HP Mitsubishi inverter vector control;

   Wire arranging system: Mitsubishi 400w servo motor + Mitsubishi servo driver

E. Detailed technical features

1. Power：AC 380V,3 phase，50Hz(China)，subject to customer's demand：220v、415 voltage source.

2. Operation direction: right-handed machine (with inlet at the left hand), subject to customer's demand.

3. Diameter applicable：Φ1.5～Φ10mm flexible wire and cable such as electronics, auto, telecommunications and power；BV, BVVB construction wire.

   The finished wire diameter range is 1～6 ㎜². For special specifications, particular solution will be provided upon being informed in advance.

4. Wire speed: 500M/min Max（maximum）, electronics, auto, telecommunications……

5. Coil dimension: outer diameter ψ460mm/Max.╳ inner diameter ψ135～180mm ╳ height 45～100mm；

6. Coiler head size is to be provided within one week upon the signing of the contract .

7. Finished wire feeding type : Wire holding type

8. Over meter control unit : Meter counting unit 0.01M , auto alarm to reduce speed , auto coiling operating when setting meters reached .

9. Coiler head driving motor: 7.5HP ╳ 4P AC Dong Yuan Motor＋Mitsubishi inverter

10. Wire arranging device: servo motor synchronizing with the main motor

11. Overall machine electrical circuit control: Mitsubishi micro-computer PLC.

12. Operating panel with digital Graphic Operator Interface。

13. Instruments and switches on the Operating panel: touch control screen, speed regulation button, e-switch. Speed can be adjusted either on the touch control screen or by the speed regulation button.

14. Power frequency spark machine joining point reserved at the PLC is used for the spark inspection of the BV wire, eliminating waste wire(the spark breaking point) or continuing the coiling after the manual indication.（The client is supposed to install power frequency spark machine by himself)

15. Diameter measuring joining point reserved at the PLC is used to eliminate waste wire (diameter below standard) or continue the coiling after the manual indication.（The client is supposed to install diameter measuring instrument by himself)
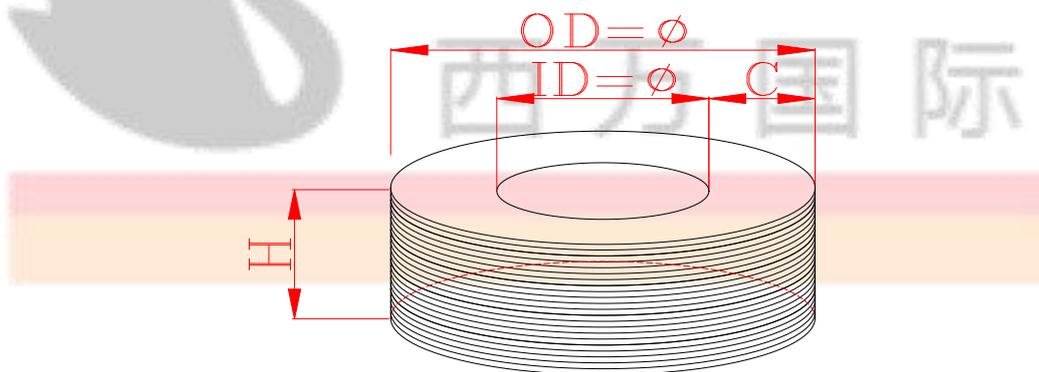
F. Main component brands

1. Main shaft motor: Taiwan Dongyuan

2. Wire arranging motor: Mitsubishi servo and servo control system. Main inverter: Mitsubishi

3. PLC: Mitsubishi

4. Temperature controller: Japan RKC

5. Bearing：Japan NSK、NTN，screw：Japan IKO

G. Specification table

Model	H(mm)	O.D(mm)	I D (mm)	Diameter (mm)	Winding speed	Average output (100M/ Coil)
CP-1246	50-150	ψ450	ψ150	ψ1-ψ6	500M/min /Max	2 Coil / min

1. Coil diagram, please specify the size. (Pls check the below drawing)

2. Coiler head diagram, please specify the size. (Pls check the below drawing)