

# **Φ 70+35 Wire Extrude Machine**

-----Equipment Specification

## **1.Application :**

- ❖ This equipment mainly used to wire and cable jacket extruding.

## **2.Main Specification :**

- ❖ Extruding material : PVC, PE , 100% plasticizing
- ❖ Finish wire diameter : 1.5-25.0sqmm(soft wire)
- ❖ Temperature arrange :  $\pm 1^{\circ}\text{C}$
- ❖ Max.wire speed : 200m/min(depend on wire diameter)
- ❖ Wire diameter concentricity :(thinnest/thickest) $\geq 92\%$
- ❖ Center height : 1000mm
- ❖ Operate direction: machine (from to operating)
- ❖ Machine's color : Machine surface ☐Green ☐light blue Safety color : yellow
- ❖ Electric box is corrugated gray ; Safety cover is yellow

## **3.Main component parts :**

No.	Name	Q'ty	Remark
1	800-1600mm End shaft pay off machine	1 set	
2	Tension dancer	1 set	
3	Straighten stand	1 set	
4	Φ 70mm Extrude master	1 set	
5	Φ 35mm Stripper	1 set	
6	Movable water tank	1 set	
7	Single layer cooling water tank	1 set	
8	Printing machine	1 set	
9	Laser diameter gauge	1 set	
10	Accumulator tension stand	1 set	
11	Dual wheels capstan	1 set	
12	Precise meter counter	1 set	
13	Frequency spark tester	1 set	
14	800-1600mm End shaft take up machine	1 set	
15	Control system	1 set	
16	Spare parts	1 group	

## **4.Main parts brand (below brand all original products,place is unlimited)**

- ❖ Motor : TECO Motor
- ❖ Inverter :Inovence inverter
- ❖ Temp.controller : Japan RKC

- ❖ Electric elements : Japan,Taiwan
- Bearing : Japanese NSK,TR,ASAHI

## 5.Each main part's technology parameter and structure description

### 1) Ø800-1600 End shaft pay off machine

- ❖ Type : Shaftless passive pay off wires,two sides pintle tightly bobbin,horizontal structure>manual lifting bobbin..
- ❖ Tension control :use 5kgs magnetic powder brake cooperate with precise tension controller adjust the pay off tension.
- ❖ Break wire check out : non-touch type photoelectric break wire check out, when the wire broken will automatic alarm and stop.
- ❖ Apply bobbin diameter 800mm-1000mm



### 2) Vertical tension machine

- ❖ Type : vertical type,up Al.wheel 5 grooves,down wheel is 4 grooves.
- ❖ Tension wheel : Φ400 Aluminum wheel,coated ceramic
- ❖ Magnetic brake 2.5kg-m,synchronous belt wheel,tension range is 800-5000g,can adjustment
- ❖ Copper conductor easy to drop off,need change it,make the groove deeper.



### 3) Straighthen stand :

- ❖ Type : Cabinet type structure,bottom is tool box,up is straighten wheel
- ❖ Straighthen wheel : Φ 100 straighten wheel,up is 2 pcs,down is 3 pcs. The wheel can adjustment freedom.

### 4) Φ70 Extrude Master :

- ❖ Screw parameter : Dia.: Φ 70mm ,L/D :26:1,revolution :10-100RPM,material : SACM-2,Nitriding hot processed,hardness HRC58-60,surface casting hard chromium,polishing processed.
- ❖ Cylinder parameter : Inner hole Φ 70mm, material SACM -1,Nitriding hot processed,inner hole grinding polishing,hardness HRC61-63
- ❖ Gear box : hard gear surface helical column gear reduce box,used 20CrMo material,Nitriding hot processed, gear surface through grinding processed,noise is lower 75DB, oil is centrifuge lubrication, appearance is square type (Copy Italy type )
- ❖ Output : 130KG/Hr (open the nose extruding,as PVC material checking)
- ❖ Heating cooling system : 5 sections casting Aluminum heater cooperate with 5 sets cooling fan alternating heating and cooling,RKC temp.controller control the temperature, the temp. Can set up within 399 °C .when the fact temp. Is higher than set up temp, heating is stop, cylinder temp.keep the set up situation,control precision is ±1°C
- ❖ Heating power and voltage : 5KW/220V, machine cabinet is 4 sections casting Aluminum heating,neck and head dies each one section heating.
- ❖ Head clamp type : screw single side clamping.
- ❖ Head type : with adjustment core shift head.can use to single layer and injection extrusion.
- ❖ Drive power : 30HP motor with converter speed governing



### 5) 35mm Stripper

- ❖ Screw parameter : Dia. :Φ35mm, L/D :20:1,revolution 10- 100RPM, material SACM-2,Nitriding hot



processed,hardness HRC58-60,surface casting hard chromium,polishing processed.

- ❖ Cylinder parameter : Inner hole  $\Phi 35\text{mm}$ ,material SACM -1,Nitriding hot processed,inner hole grinding polishing,hardness HRC61-63
- ❖ Output : 35KG/Hr (nose open to extruding,as PVC material checking)
- ❖ Heating/cooling system : 2 sections stainless steel heater cooperate with 2 sets cooling fan alternate heating and cooling,RKC temperature controller control the temp.the temp. Can set up within  $399^{\circ}\text{C}$ .when the fact temp. Is higher than set up temp, heating is stop, cylinder temp.keep the set up situation,control precision is  $\pm 1^{\circ}\text{C}$
- ❖ Heating power and voltage : 3KW/220V, machine body is 3 section heating,neck is one set
- ❖ Feeding device : stainless steel hopper, with perspective hole, manual feeding
- ❖ Drive power : 3HP motor with frequency adjust speed.



## 6) Movable water tank

- ❖ Material : SUS304 Stainless steel , thickness is 2mm
- ❖ Water tank length : 3m retractable type activity water tank, stroke is 500.
- ❖ Water wiper : water cabinet exit install dual sections subdivision water wiper,air flow is big,have good wiping function,on above of wiper install stainless steel cover,prevent steam spit out, blowing cabinet designed bloop,reduce the blowing noise.

## 7) Single layer cooling water tank

- ❖ Material : SUS304 Stainless steel,thickness is 2mm
- ❖ Water tank structure : single layer U type structure,130mm\*120mm, total length is 10m.
- ❖ Water wiper : water tank exit install water wiper,inside the exit water cabinet,design bloop,reduce the blowing noise

## 8) High speed printer

- ❖ Type : dual motor mixer printer,
- ❖ Speed :350m/min
- ❖ Print wheel fixed use screw,the more screw small,the print wheel is better.
- ❖ With more 5 ink box for spare parts. Ink box make special,make it bigger, and as ink box size make 30mm height cooling water box,two sides with valve control water flowing.



## 9) Laser diameter measuring gauge

- ❖ High precision laser measuring diameter device,wire diameter automatic feedback control precision,wire range is between 0.2 - 20mm

## 10) Accumulator tension stand

- ❖ Type : horizontal type take up accumulator,length 10m,storage wire length 200m,4 columns supporting sliding rail
- ❖ Storage tension :1HP gear reduce motor drag 10kg magnetic powder clutch control core wire tension, multi-coil steel rope wheel driving.
- ❖ Apply wire diameter : Max.  $\Phi 12\text{mm}$
- ❖ Tension range : 500-2000N
- ❖ Store wire wheel :  $\Phi 300\text{mm}$  alloy Al.wheel,fixed ends 10 grooves+remove ends 11 grooves.
- ❖ Anti-collision device :  $\Phi 25$  limited rod with press spring buffer device.

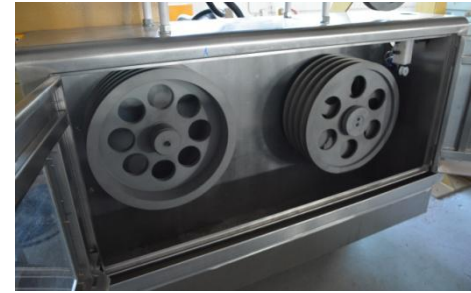




- ❖ Safety device :front and back ends install limit switch,synchronize break wire emergency control.
- ❖ Height : accumulator wheel bottom height is 1800mm,can as customer's require make it.

### 11) Dual wheel capstan

- ❖ Type : dual wheel cabinet structure.
- ❖ Leading wire speed : Max.200m/min.
- ❖ wheel parameter:Φ650mm Al.wheel,revise by balance.grooves coating ceramic
- ❖ Water cabinet: closed water tank,straight type shutter,the shutter set organic glass perspective.
- ❖ Leading power : 5KW motor with inverter speed governing,linkage with master control.



### 12) Precise meter counter

- ❖ Meter counting wheel : meter count wheel outer edge 159.15mm,precision to meter,outer edge surface processed with hardness anode
- ❖ Meter checking : imported infrared ray photoelectric switch meter checking,with 2 sections meter counter,with pre-meter function,counting meter precision.



### 13) Frequency spark tester

- ❖ Input voltage : AC380V,50/60HZ
- ❖ Testing wire diameter :0.5 -12mm
- ❖ Testing function require : break or copper leakage will automatic stop machine,breakdown times record,cover not close well cannot start,as UL standards.Max.checking speed is 400m/min,when take up machine stop,then spare tester will auto stop.



### 14) Ø800-1600 End shaft take up machine

- ❖ Bobbin size :800-1600
- ❖ Bobbin lifting speed :0.6m/min
- ❖ Lifting motor : BLYDO-17-0.75KW AC50HZ 380V
- ❖ Open/close pitch :750-1180mm
- ❖ Open/close motor :BLYDO-17-0.75KW AC50HZ380V
- ❖ Suitable wire size : max.40mm
- ❖ Take up wire speed : 2.3-200m/min
- ❖ Take up motor :Y132M-4-11KW torque motor control
- ❖ Gear box:KAF87-Y160M-4-100
- ❖ Traverse motor :BLYDO-17-0.75KW AC50HZ 380V
- ❖ Traverse type : screw traverse wire,pitch adjust by time relay.



### 15) Control system :

- ❖ Electric heating control : total 7 sections temperature control .
- ❖ Power control : control by main switch and each branch switch control.
- ❖ Motor operate control : Inverter separate drive control each motor.

- ❖ Indicator control : 7 controllers precision control 7 temperature area.
- ❖ Control system : operate control through switch button control,temp.control part independent control by RKC temp.controller.
- ❖ Voltage meter : voltage display
- ❖ Electric heating temp.controller : within  $\pm 1^{\circ}\text{C}$  range precision control 11 temp.area of temp.of set up testing temp.point, different temp.set can as different processing requirement.
- ❖ Electric heat ammeter : display each temp.area heating,easy to sight.
- ❖ Cooling fan control : control by RKC temp.controller,make the temp.curve to flat.
- ❖ Capstan revolution meter : revolution meter drive by inverter output signal. Meter display with inverter output wire synchronize.
- ❖ Extrude and capstan linkage rate : single action control,have to reaction quickly,feedback on time;extrude and capstan control by relay,convenience fast.Link adjustment adjusted by micro-adjustment button,reaction speed is fast,feedback on time.
- ❖ Each part operate indicator : each part operation indicator display smart,can reflect the operation situation exactly.  
Inside of control cabinet lighting : open the door,lighting will auto open,easy to operate
- ❖ Fan of control cabinet : close the door,fan will auto blower,make the inside appliance operation steady.
- ❖ Meter counter and control feedback: meter indicator accept the counter's pulse signal,length and pulse rate can freedom adjustment,convenience calculate the length,and also have forecast meter function,easy worker operating.
- ❖ Suction alarm control : automatic suction material,auto control the material dryness,without material auto alarm, make the work precision and reduce the workers labor intensity.



## 16) Spare parts

Name	Unit	Q'ty	Remark
Tool box	Pieces	1	
Operation instruction book and circuit	Part	1	
Allen wrench	set	1	
Nose clamp special wrench	bar	1	
Round nut wrench,7inch monkey wrench	bar	1	
Scissor,Nipple pliers	bar	1	
Mold	set	1	Buyer provides wire diameter
+,- screwdriver	bar	Each 1	
neck,nose clamp and dies heater	Set	Each 1	
Thermoelectric couple			