

Fully automatic “Air coil” winding machine



Application:

For winding self supporting coils using thermo-plastic coated wire. The wire is wound onto a former and the turns “bonded” together. The former is then removed and the finished coil ejected from the machine.

Products include: RFID coils, laser heads, voice coils, magnet coils, sensor coils, vibrator coils and pancake motor coils.

Main features:

- Automatic clamp/cut system, layer winding, material unloading and cleaning of the tool during each cycle, dispensing oil release agent if required.
- Fine programmable pitch control enabling precise layer winding.
- LCD screen for easy setup, with options for PC link.
- Wire tensioner with magnetic braking provides constant tension.
- Synchronous drive tailstock ensures precise tool alignment and allows for smaller core ID's.
- Temperature of the hot air system is freely programmable.



Options:

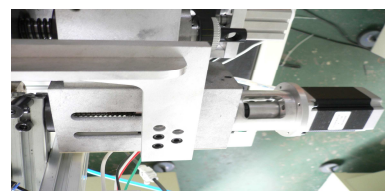
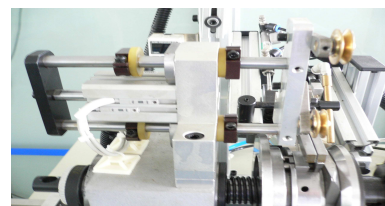
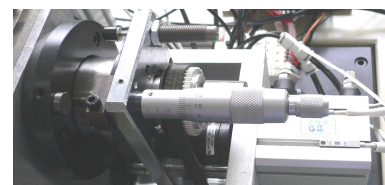
A1 Typically used in the production of RFID antenna air coils. It uses a programmable traverse which can be controlled by either stepper or servo motor. A pneumatic tailstock, as shown, has a micrometer stop allowing accurate set up of the coil width.

A2 As above but used mainly in the production of air coils where electrical current bonding is required.

A3 Is used predominantly for the production of single wire width IC card coils. It utilizes a two position wire guide, first position for winding, second for cut/clamping of the start and end.

C Used in the manufacture of a wide range of air coils. This machine is similar to the A1 but is fitted with a servo positioned tailstock. This allows very precise coil widths to be achieved and due to its rigidity is recommended when layer winding coils of over 6 layers.

If a number of coil types are required from one machine, then the programmable tailstock position allows a quicker tool changeover time.



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Main technical specifications				
	A₁	A₂	A₃	C
Coil diameter - max	<100 mm	<100 mm	<100 mm	<80 mm
Coil width larger available on request	< 10 mm	< 10 mm	< 4 mm	< 20 mm
Wire size	0.02 - 0.60 mm *Note <1 mm diameter for model A ₂ as it uses insulated cable			
Controlling system: freely programmable	Two axis, Traverse motor (X) Stepper or servo option. Spindle servo (Z)	Two axis, Traverse Motor (X), Spindle servo (Z)	One axis, Spindle servo (Z)	Three axis, Traverse servo (X) Width-setting (Tailstock) servo, (Y) Spindle servo (Z)
Programmable pitch resolution	0.001mm			
Bonding method	Hot air Max 800°C	Current bonding	Hot air Max.800°C	Hot air Max.800°C
	All models are available with alcohol application			
Spindle position accuracy	±1°			
Max spindle speed	0-3000 rpm			
Air supply // consumption	4.5-6 Bar // 80-100 L/min			
Power supply	AC220V ±5% 50HZ			
Power consumption	2KVA (hot air bonding)			
Weight	120 Kg			
Dimension	1200(L) × 800(W) × 1600(H)			