

Smart Winder[®] HV Series
Semi Automatic Winding Machine for HV Coils



Synthesis

Description

The *Smart Winder® HV* machine is designed & equipped to produce High Voltage Coils for the Distribution Transformers. This machine is built to automate certain critical processes during winding process & to feed inter layer full-width paper insulation for the coils with minimum interventions by the operator.

A high performance multi-axes motion controller governs the motion of the spindle and traverse driven by asynchronous and synchronous servo motors respectively.

Closed loop tension control with AC servo motor and dancer feedback delivers superior and consistent tension of conductor during winding. The inter-layer insulation paper is fed at precise tension with the help of Pneumatic Caliper Braking System.

PLC Based control system enhances the productivity by precisely controlling the motion of both spindle and traverse and eliminates any operator intervention during winding, making it best suited for high volume production.

Features

- Closed loop servo tension control with dancer feedback mechanism for conductor.
- Air shaft mounted inter layer paper insulation feeders with constant tension control & tailstock support.
- Paper edge cutting arrangement for the full width insulation paper and edge fill paper feeder.
- Precise pneumatically operated tension control for the end fill tape.
- Adjustable Wire guide unit close to winding
- High performance PLC based control along with color touch-screen user interface.

Technical Specifications

Particulars	Model : HV 400	Model : HV 600	Model :HV 800	Model :HV 1200
Coil				
Length	400 mm (max.)	700 mm (max.)	900 mm (max.)	1300 mm (max.)
Winding Diameter	400 mm (max.)	500 mm (max.)	700 mm (max.)	800 mm (max.)
Swing Diameter	450 mm (max.)	600 mm (max.)	800 mm (max.)	1000 mm (max.)
Weight (LV + HV)	50 Kgs. (max.)	250 Kgs. (max.)	500 Kgs. (max.)	800 Kgs. (max.)
Conductor				
No. of Round Conductors	1	1 or 2	1 or 2	1 or 2
Round Wire Diameter (Cu)	0.3 - 2.0 mm	0.5 - 2.5 mm	0.8 - 3.5 mm	1.2 - 4.0 mm
Round Wire Diameter (Al)	0.5 - 2.5 mm	0.8 - 3.0 mm	1.0 - 4.0 mm	1.5 - 4.5 mm
Dual Round Wire Size (Cu / Al)	N/A	N/A	2 x 3.0 mm (max.)	2 x 3.5 mm (max.)
No. of Strip Conductors	N/A	1	1 or 2	1 or 2
Strip Wire Sizes (Cu / Al)	N/A	4 x 2 to 12 x 3 mm	4 x 2 to 15 x 4 mm	4 x 2 to 15 x 5 mm
Double Strip Sizes (Cu / Al)	N/A	N/A	75 Sq. mm (max.)	100 Sq. mm (max.)

Also available in customised Specifications

Synthesis Winding Technologies Pvt. Ltd.



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