



FOIL WINDING MACHINES

The FWM series foil winding machines are designed for production LV coils of distribution, power and cast resin transformers with one or two copper or aluminum foils,

The main control panel with 15" color touch screen allows easy creating winding program. All programmed steps for cooling channel or lead out operations will be automatically stopped at all necessary positions and advises the operator about the next step. Our winding control system allows for easy changes of the software according to the Purchaser's needs and language.



The machine can be equipped with one or two foil decoilers. Each decoiler is equipped with drive, hydraulic expandable mandrel, swiveling tailstock, pressing rolls and brake. Its own regulated brake system allows to wind coils under constant foil tension regardless of foil's different thickness or coil's size.

Edge alignment ensures precise conductor positioning on the coil during winding process.

The standard design of machine is equipped with two insulation decoilers and three end-fill strips on each side.

Each insulation decoiler can be pulled out of the machine to easy load supply coil. The mandrels are pneumatically expandable to allow quick and easy loading.

Paper alignment ensures manual paper positioning on the insulation decoiler after loading supply coil.

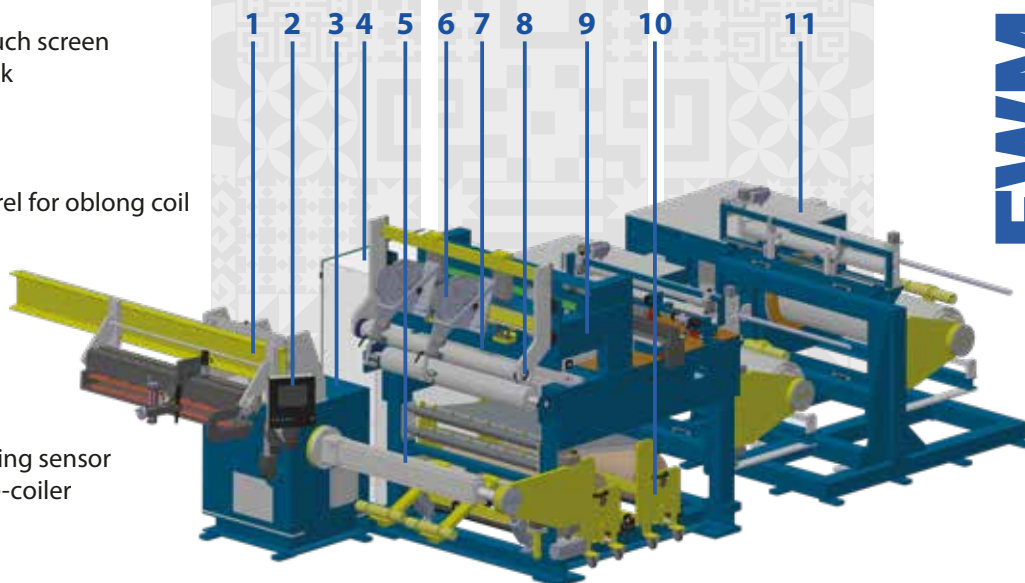


Three end-fill strips ensure to get required thickness on both sides of coil. Winder is equipped with main drive, faceplate, counter bending roller.



**FWM****MACHINE CONSISTS OF TIG:**

- 1 TIG welding
- 2 Control panel with 15" color touch screen
- 3 Winder with headstock, tailstock and foot pedal
- 4 Control cabinet
- 5 End-fill strip unit
- 6 Rectangular expandable mandrel for oblong coil
- 7 Disc cutting knife
- 8 Counter bending roll
- 9 CPW – Cold Press Welding
 - a) Grinding unit
 - b) Foil cleaning felt
- 10 Insulation de-coiler
 - a) Ultrasonic diameter measuring sensor
 - b) Pressing arm with rolls at de-coiler
 - c) Deburring units
 - d) Edge alignment system
 - e) Foil feeding rolls
- 11 Foil de-coiler
 - a) Ultrasonic diameter measuring sensor
 - b) Pressing arm with rolls at de-coiler
 - c) Deburring units
 - d) Edge alignment system
 - e) Foil feeding rolls
- 12 Remote service (GSM 4G) access

**AVAILABLE OPTIONS:**

- Foil protection paper rewinder
- Insulation width cutting unit
- Motor-driven tailstock to wind on core legs
- Swiveling main drive
- Conductor foil pulling chain
- Coil unloading device
- Bandaging unit
- Safety system:
 - a) Fence
 - b) Laser area scanner,
 - c) Light barrier
 - d) Laser safety scanner at winder
- Welding unit is available with following current ranges: 400 A, 500 A, 550 A, 600 A

TECHNICAL DATA

MACHINE	FWM800	FWM1000	FWM1200	FWM1400	FWM1600
Coil Diameter, mm	900	900	900	900	900
Coil Width, mm	860	1060	1260	1460	1660
Winding Speed, rpm	0 - 30	0 - 30	0 - 30	0 - 25	0 - 20
FOIL Cu / Al					
Number of Foil Decoilers	1 - 2	1 - 2	1 - 2	1 - 2	1 - 2
Foil Width, mm	200 - 800	200 - 1000	200 - 1200	300 - 1400	300 - 1600
Al Foil Thickness, mm	0,4 - 3	0,4 - 3	0,4 - 3	0,4 - 3	0,4 - 3
Al Foil Cross Section, mm ²	80 - 2400	80 - 3000	80 - 3600	120 - 4200	120 - 4800
Cu Foil Thickness, mm	0,3 - 2,5	0,3 - 2,5	0,3 - 2,5	0,3 - 2,5	0,3 - 2,5
Cu Foil Cross Section, mm ²	60 - 2000	60 - 2500	60 - 3000	90 - 3500	90 - 4000
Decoiler Expanding Range, mm	380 - 415/515	380 - 415/515	380 - 415/515	380 - 415/515	380 - 415/515
Outer Diameter of Supply Roll, mm	1000	1000	1000	1000	1000
INSULATION					
Number of Insulations	2	2	2	2	2
Insulation Width, mm	860	1060	1260	1460	1660
Insulation Thickness, mm	0,08 - 0,25	0,08 - 0,25	0,08 - 0,25	0,08 - 0,25	0,08 - 0,25
Inside Diameter of Supply Roll, mm	76	76	76	76	76
Outer Diameter of Supply Roll, mm	400	400	400	400	400
END-FILL STRIP					
Number of End-Fill Strips Per Side	2 - 4	2 - 4	2 - 4	2 - 4	2 - 4
End-Fill Strip Width, mm	10 - 30	10 - 30	10 - 30	10 - 30	10 - 30
End-Fill Strip Thickness, mm	0,2 - 1	0,2 - 1	0,2 - 1	0,2 - 1	0,2 - 1
Outer Diameter of Supply Roll, mm	400	400	400	400	400

Note: Machines with different specifications are available on request.