



AUTOMATIC MACHINE TO ASSEMBLE AND WELD TERMINAL PINS TO COILS AND MOUNT THE PLASTIC PLUG



WATCH THE VIDEO

Machine to assemble terminal pins automatically to coil, to mount the plastic plug on the bottom terminal pin and to weld the coil to terminal pins.



Summary

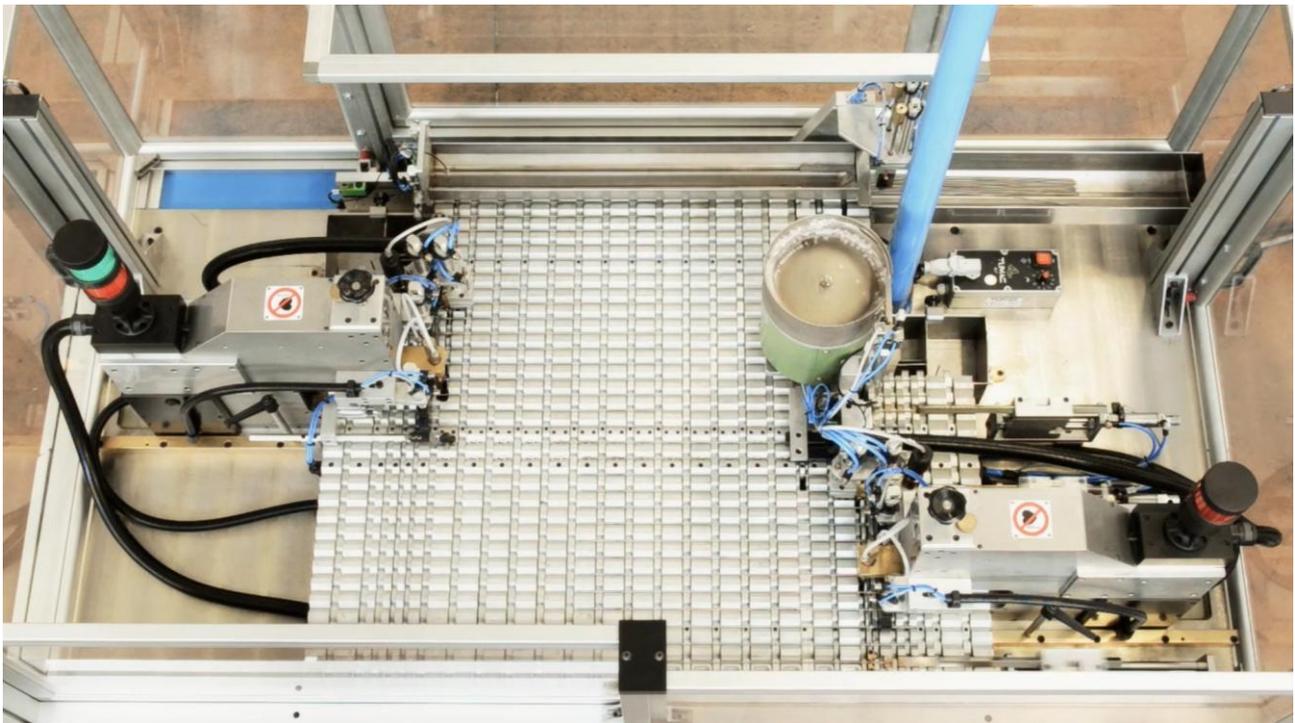
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MACHINE COMPOSITION

- 1 Stainless steel hopper to put coils into position.
- 2 Pincers with pneumatic movement that collect and transfer two coils from the feeding hopper into the collecting hopper, by means of a d.c. motor.
- 1 Hopper to collect the two coils and to unload them one at a time onto the transfer unit (walking beam).
- 1 Optic sensor to check the presence of coil in the transfer unit.
- 1 Device to align the coil for the assembly of the top terminal pin on the transfer unit.
- 2 Automatic feeders for terminal pins.
The terminal pins are positioned in bunches in the feeding hoppers with all the tops facing the same direction. One pin is fed at each machine cycle and its presence is automatically checked on the transfer by a fibre-optic sensor.
- 1 Linear transfer which receives the coils and terminal pins from the different feeders and transfers them to the various working stations.

WORKING STATIONS ON THE TRANSFER



1st Station:

Assembling of the top terminal pin to the coil, after the rotation of the terminal pin.
This station consists of 1 coil holding clamp and 1 pneumatically activated insertion unit with adjustable stroke, to insert the top terminal pin into coil end.
While the pin is inserted into the coil, it is rotated to make the operation easier.

**2nd Station:**

Welding of the top terminal pin to coil.

This station is completed with 1 spot-welder.

Before starting the welding operation the position of the coil/pin assembly to be welded is corrected with reference to the position of the welder electrodes, to guarantee the repeatability of the welding point in the desired position.

Welding test and storage of the data of the pieces out of range, in order to reject them at the end of the cycle.

Device to transfer the welded assembly (top terminal pin - coil) to the opposite side of the machine.

The transfer is made by a set of small motorised rolls.

The transfer system is not affected by coil length (within the capability of the machine).

3rd Station:

Assembly of bottom terminal pin and plastic plug.

The station is formed by an automatic vibrating feeder for the plastic plugs and a pneumatically activated insertion unit, with adjustable stroke.

4th Station:

Fibre-optic sensor. It checks the presence of the plastic plug mounted on the bottom terminal pin.

5th Station:

(Like station no. 2, for bottom terminal pin)

6th Station:

(Like station no. 2, for bottom terminal pin)

7th Station:

Location of the plastic plug at the required position.

The station is formed by a pneumatically activated insertion unit, with adjustable stroke, to place the plastic plug at the required position on the bottom terminal pin.

8th station

Selection of rejected pieces out of the welding range.

The machine is complete with an electric cabinet, a swivel controller and diagnostic program.

The operator can find the causes for the machine stops on a suitable display.

**TECHNICAL CHARACTERISTICS**

Cycle time of the machine (up to)	: sec.	5
Terminal pin length	: mm	45-200
Terminal pin diameter	: mm	2.5-3
Coil length	: mm	to be defined
Coil diameter	: mm	2-3
Minimum wire diameter	: mm	0.20-0.90
Welding power	: KVA	16
Power supply	: V	3 PH x 400V + N + G
Pneumatic supply	: Ate	6
Machine dimensions	: mm	2500x2500x1400

AVAILABLE VERSIONS

Model	Coil length
Mod. 121/10.100000	50 – 600 mm
Mod. 121/15.100000	50 – 1100 mm

OPTIONS

Mod. 121/00.200010	Set of additional parts for 2nd plastic plug
Mod. 121/10.200050	Pair of drawers – feeders of terminal pin with length 45-200 mm, complete with spacers