

Wire Technology & Machinery



Line suitable for FLAT and ROUND wires with precise synchronization of its taping heads by electric axis for the precise application of polyimide-FEP composite tapes (Apical®, Kapton®, Norton®, etc.) complete with thermal process for tape sintering.

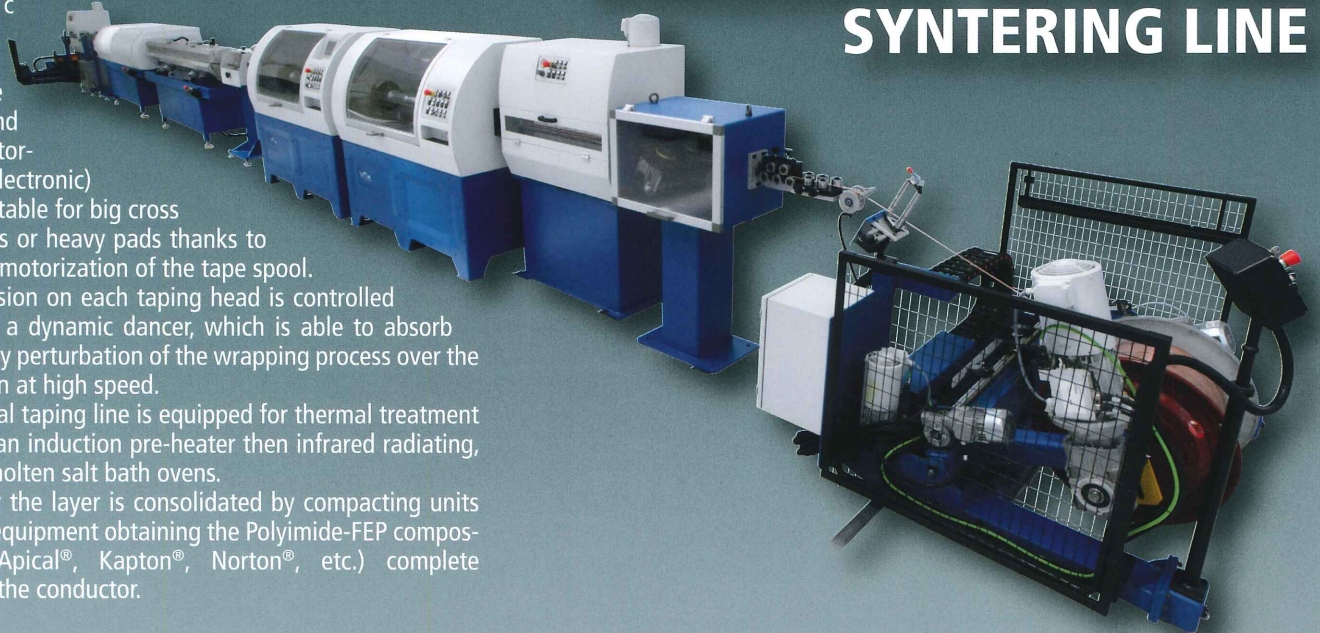
This machine can be equipped with two, three or more concentric taping heads, of both single motorized and totally motorized (fully electronic) type, also suitable for big cross wound spools or heavy pads thanks to the separate motorization of the tape spool.

The tape tension on each taping head is controlled by means of a dynamic dancer, which is able to absorb effectively any perturbation of the wrapping process over the flat wire, even at high speed.

This horizontal taping line is equipped for thermal treatment obtained by an induction pre-heater then infrared radiating resistors or molten salt bath ovens.

Subsequently the layer is consolidated by compacting units and cooling equipment obtaining the Polyimide-FEP composite tapes (Apical®, Kapton®, Norton®, etc.) complete adhesion on the conductor.

POLYIMIDE-FEP (APICAL®, KAPTON®, NORTON®, etc.) HORIZONTAL TAPING AND SYNTERING LINE



Main characteristics:

- Pay-off and take-up units acting with dancer or in torque control.
- Standard wire-guide device for take-up or traversing movement for take-up and pay-off to maintain the wire in straight direction without any axial deviation.
 - Possibility to operate with several taping heads, of single or fully motorized type, also for big cross wound spools or heavy pads.
 - The dynamic dancer, on the taping heads, maintains the tension of the tape constant and stable getting a perturbation-free process highly appreciated in case of "very flat" wires (high width/thickness ratio).
- Fast pre-heating process with high frequency heater and following compacting units of the cable by rollers.
- Infra-red light, radiant or molten salt bath ovens for sintering process with fully automatic opening and closing movement during start-stop phases.
- The most suitable combination of pulling units (one capstan, one or two caterpillars or combined caterpillar/capstan) perfectly synchronized with the rotation of the head to control precisely the linear speed and the wire tension.
- Cooling system with re-circulated cold water and air wipers for drying the wire.
- Digital electronic control system with possibility to be connected to the internal network and to internet for remote assistance.



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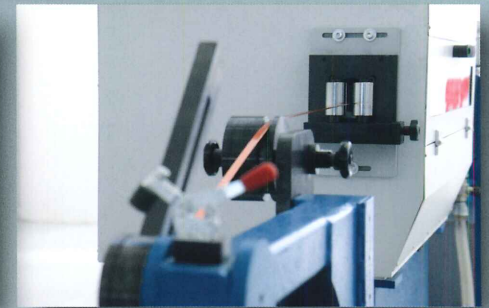
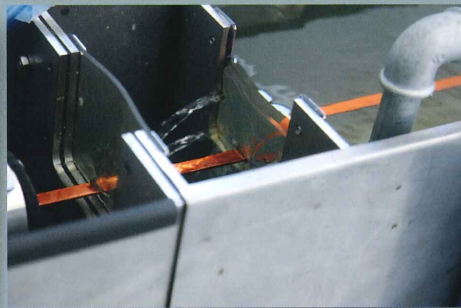


Technical data

Round wire diameter	From 0,5 mm to 20 mm
Flat wire dimension	From 4 mm ² to 150 mm ²
Line speed	Max. 50 m/min
Number of tapes	2, 3 or more tapes (on request)
Tape tension	From 3 N to 25 N
Taping pitch precision	Max. 0,05 mm
Take-up / pay-off reel dimension	Up to 1600 mm in cantilever construction Up to 1000 mm in single shaft construction
Paper feeder	Automatic, suitable for any reel dimension
Thermal process	Induction pre-heater Infra-red light, radiation, molten salt bath ovens Pyrometer feedback control
Compacting	By adjustable silicon roller in cross directions
Cooling and drying	By water re-circulation tank and air drying system

Other options:

- Wire straightening with steel rollers and cleaning device with brushes to ensure the best cable preparation
- Paper feeder installed on the take-up unit, suitable for the automatic deposition of a complete turn of paper interlay on the reel, during wire winding
- In-line spark testers and other measuring devices for quality control
- Strobe-lamp automatically synchronized with the rotation of each head
- Tele-service system for remote connection by internet access
- VISIO SYSTEM® by camera for in-line inspection and other software utilities



All the characteristics can also be personalized on customer request.
All technical characteristics may be changed without prior communication.

