

Laser Perforation for Multiple Bobbin of Cigarette Tipping Paper



Picture shows the turnkey, ready for production MLP-50 system including the Micro Perforator, the Rewinder with slitting knives, the CO₂ - Laser Source and control cabinet.

The MLP-50 System is a turnkey Laser Perforator Systems which offers highly attractive state-of-the-art technology for offline perforation of cigarette tipping paper.

The MLP-50 System perforates a maximum of 16 rows and up to 250.000 holes/second at a maximum web speed of 700 m/min. The maximum web width is 270 mm for multiple bobbin operation.

The MLP-50 System is a ready for production system which perforates an extremely consistent hole-to-hole quality which results into a minimum standard deviation giving the MLP-50 System the highest reliability.

Technical details of the MLP-50 System:

Rewinder:

- Max. bobbin diameter: 800 mm
- Paper length unwind: max. 4000 m, optional up to 12000m
- Max. bobbin / paper width: 270 mm, other width on request
- Ramp up time: 0 – 700 m/min below 3 sec.
- Max. winding speed: 700 m/min
- Printed and un-printed paper: 35 to 45 gr./sqm.
- Web guide: 2 optical edge sensor for best winding quality
- Slitter: max. 4 knives for inline slitting
- Base plate: solid steel base plate for perfect long term stability

Micro Perforator:

- Based on patented Vario – Polygon System
- Rotating speed: up to 70.000 RPM
- Max. optical pulse frequenz: up to 250.000 holes/sec, 15.400 Hz per row
- Hole density: range from 5 – 50 holes/cm
- Typ. Porosity: 50 to over 4000 Coresta Units
- Hole diameter: adjustable from 50 – 300 µm

Focusing Heads:

- 16 perforation heads; other amount on request
- All heads can be moved across the whole web
- Each focusing lens is adjustable with 0,01 mm resolution
- Each head with individual shutter

CO₂ – Laser source with 10,6 µm wavelength:

- Laser power ranging from 500 to 2000 Watt
- Optimised power stabilisation

Chiller:

- Water-to-Air or Water-to-Water cooling
- +/- 1°C temperature regulation

Exhaust dust Filter system:

- Various models are available, suitable to the demand
- Removes and filters debris of the perforation process