



Homogeneous Etching for fine line technology

It is not only the perfect process uniformity, but also the simple maintenance access that makes our Etching equipment unique.

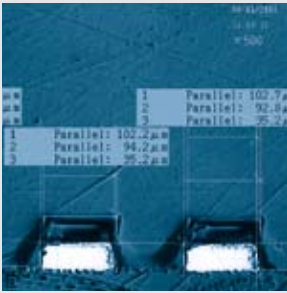
Areas of application

- Etching of PCBs, metal parts, glass, semiconductive
- Alkaline, cupric and ferric etch applications
- Flexible material and reel to reel application available

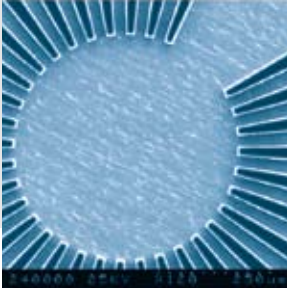
Features and benefits

- Fan nozzles with slim spray angles
- Integrated flow guides
- Staggered spray nozzle configuration
- Nozzles aligned to spray in conveyor gap
- Oscillation perpendicular to working direction
- Optional: closed loop process control
- Optional: different recycling units
- Front door with water sealing
- Fold down front doors with pullout manifold
- Integrated post etcher for enhanced uniformity
- Compact cascade rinsing
- Uniformity 2 - 10%, depending on application
- > 900 etching machines installed worldwide





PCB Cu lines



PCM star structure



Etching line

Technical Data Höllmüller EVOLUTION - Etching

Process	• Metal etching, inner and outer layer					
	• Rinsing					
	• Dwell time	alkaline	45 sec per oz			
		cupric	90 sec per oz			
		ferric	depending on application			
	• Process Temperature	standard	45 - 52 °C (113 - 125 °F)			
Dimensions	• Typical PCB applications					
	• Transport Speed	0.5 (1.65)	1.0 (3.3)	1.5 (4.9)	2.0 (6.6)	m/min (feet/min)
	• Width	1550 (61)	1550 (61)	1550 (61)	1550 (61)	mm (inch)
	• Length for inner layer	4395 (173)	5445 (214)	6195 (244)	7765 (306)	mm (inch)
	• Length for outer layer	4170 (164)	5670 (223)	6420 (253)	8020 (316)	mm (inch)