

PCB / PCM

Höllmüller EVOLUTION
Etching

R | E | N | A | ●



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.

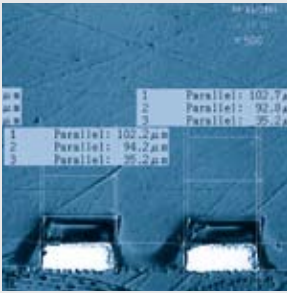
Areas of application

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

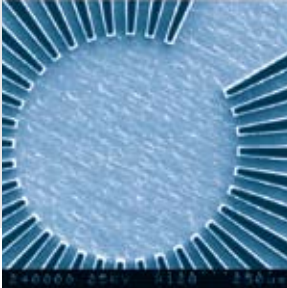
Features and benefits

- 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
- Fold down front doors with pullout manifold
- 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 Hölmüller 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 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					
	Acid Etcher	3895 (153)	5005 (197)	5604 (221)	7075 (279)	mm (inch)
	Alkaline Etcher	4215 (166)	4785 (188)	5325 (210)	6275 (247)	mm (inch)
FeCl ₃ Etcher	Depending on customer specification					