



Photo Chemical Milling (PCM)

For etching metallic foils and sheets

Since the 90s, SCHMID has gathered the necessary expertise for all types of etching applications. Combined with our high manufacturing standard this forms the basis for the highest quality and precision of our systems - and this at the best price-performance ratio.

Details

Etching is a very important part in the PCM process. For instance, it needs to be considered how metals will be processed and which technical requirements are necessary according to the design and the application of the manufactured product. Furthermore, details as the type of chemicals, line speed, process time or transport system determine the advanced SCHMID etching machine layout. In addition to the etching equipment, SCHMID is also offering equipment for cleaning, developing and stripping.

High etching quality

The fine line spray manifold allows a high etching factor with smaller tolerances. Precise etching results and a uniform spraying pattern are achieved.

Option: individualized module configuration

To create an individual process sequence the etching modules can be combined with modules of the entire line system in a customized configuration.

Additional Options:

- Different systems for process control (pH, redox, density and conductivity sensor etc.)
- Exhaust condensor system
- Drip pan
- Solution transfer tank for waste water
- Intermitting etching module

Technical Data

Features:

Working width: 650 mm

Working temperature: max. 52°C (PVC container)
max. 68°C (Titanium container)

Working height: \geq 900 mm

Conveyor speed: 0.01 - 3.0 m/min
(option: 0.2 - 6.0 m/min)

Transport system: Standard Transport
(option: Flex Transport)
(option: Reel-to-Reel Transport)

Panel thickness: 0.3 – 6.0 mm
(option: 0.05 mm – 3.2 mm)

Panel width: max. 650 mm
min. 250 mm
(option: min. 50 mm)

Spray manifold: 6-fold staggered
Oscillation spray manifold

Control system: PLC controlled

Dosing system: Process control based on various sensors available

Advantages

- Advanced tank and dosing systems and continuous process control
- Suitable for products with substrate on one side and a metal layer either on one side or both sides
- Suitable for etching right through solid metal
- Selective etching of structured surfaces with varying depth
- Different types and thicknesses of metal can be used
- Various etchants are used, depending on the metal to be processed
- Flexible transport systems which can be adapted to various panel materials and thicknesses to optimize the processing of sensitive surfaces
- Transport system suitable for roll-to-roll applications and for use with a transport net
- Ready for Industry 4.0

