

MATERIA PCE

Poly Silicon Chunk Etching, Cleaning & Drying



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SINGULUS TECHNOLOGIES is the world leader in manufacturing mass production equipment for Optical Discs CD/DVD/Blu-ray. In the Solar segment, SINGULUS and STANGL are cooperating with leading cell manufacturers in the development of new technologies and new plant concepts for improved cell concepts with higher efficiency and production technologies with decreasing production costs. The company's target is to position itself at the forefront for the introduction of new technologies with respect to silicon as well as thin film solar technology.

During times of cost pressures in the photovoltaics market, the interest regarding new plant concepts increases. In the coming years, SINGULUS will offer a broad product range of new machines for the photovoltaics industry, which will offer manufacturers of both silicon and thin film cells new production technologies and particular cost advantages.

SINGULUS and STANGL will systematically expand the solar activities. Both companies complement each other ideally in being able to offer a broad product range of machines and equipment for the photovoltaics industry in the coming years.

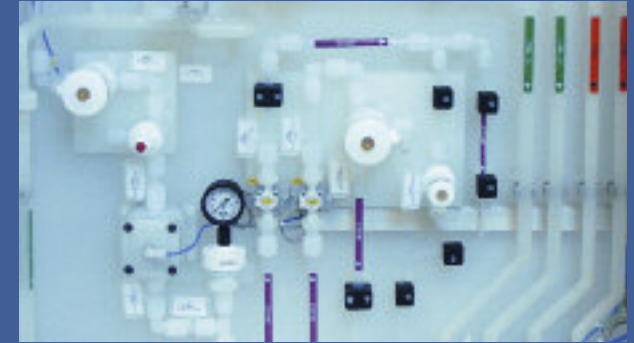
MATERIA PCE – Poly Silicon Chunk Etching, Cleaning & Drying

With MATERIA PCE STANGL launches its first product for raw material preparation.

The MATERIA PCE is a batch system for chemical etching, cleaning, and drying of poly silicon chunks. The system is adapted to the high purity demand in poly silicon production. Simultaneously, lowest possible total cost of ownership (TCO) has been a key driver in the development of this machine.

The MATERIA PCE is a fully automated system for high throughput industrial production. It relies strongly on the STANGL SILEX product line for cell fabrication which can look back on a world-wide installed base of over 80 machines.

Main Components



Main Features

- _ Proven, highly integrated design based on STANGL's SILEX
- _ For poly silicon (electronic, solar or UMG grade)
- _ Chunk sizes between 10 and 180 mm (other formats upon request)
- _ Throughput: from 500 to p.a. to 2500 to p.a.
- _ Built for non-stop utilization: 24/7, 365 days/year
- _ High availability (uptime > 95 %)
- _ Compliance with international safety regulations
- _ Flexible coupling to adjacent processes by cart transportation system

Controlled, Precise, Intelligent

- _ Real-time Siemens S7-300 plc control of wet bench
- _ State-of-the-art full graphic user interface
- _ Prepared for connection to Manufacturing Execution System (MES), e.g. via OPC, XML, or SECS/GEM
- _ Network communication support
- _ Carrier tracking and data logging

High Flexibility in Process Design

- _ Acidic etching process, alkaline etching process, or combined process
- _ Highly accurate dosaging
- _ Multi-recipe management via graphical user interface or MES
- _ Process support available

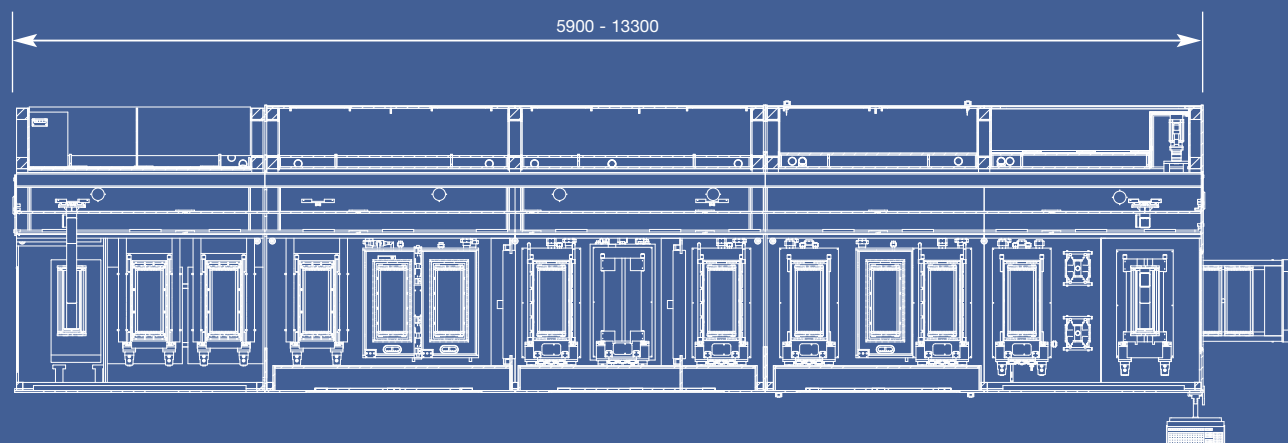
By Using Optimized Process Baskets

- _ Short drying time
- _ Minimized carry-over of water and acid

Low Cost-of-Ownership

- _ Minimized fresh water consumption
- _ Minimized chemical consumption
- _ Continuous tracking of consumption data

Technical Data MATERIA PCE



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