

DynaSmart®

Compact modular plating system



General Metal Finishing

Production technology

atotech.com



Maximized efficiency with minimized environmental impact

64,000
kilogram

capacity per day
(footprint of 750 m²)

Designed for high productivity and greater flexibility with a smaller footprint

DynaSmart® is MKS' Atotech innovative and patented compact modular plating line for the corrosion-resistant plating of fasteners and stampings. It is designed to achieve higher plating throughput with a smaller environmental footprint. DynaSmart® features a revolution in automation design that when combined with MKS' Atotech portfolio of acid and alkaline zinc and zinc alloy processes maximizes efficiency while meeting the highest sustainability standards. This is further complemented by MKS' Atotech sustainable passivates and auxiliary regeneration systems. This high-quality plating system manages to consume fewer resources and chemicals as well as minimizing wastewater generation without compromising on plating performance.

Available as a modular system, DynaSmart® is compact and can be seamlessly integrated into a factory's pre-existing design. Its easy installation allows for effortless expansion as production demand increases. As part of MKS' Atotech unique approach of combining equipment and chemistry with leading service, the DynaSmart® design came about through close collaboration between in-house experts in chemistry and plating equipment engineering. The result is a concept that optimizes harmonious processes and workflows and provides a comprehensive solution for plating shops.

Innovative technology based on 70 years of experience in plating equipment manufacturing

A highly sustainable and flexible system

The DynaSmart® line is smaller than conventional plating lines. This means that the overall active bath volume is smaller too allowing for a decrease in total exhaust capacity. The smaller tank size generates a more consistent current density, resulting in a further decrease in chemical usage and better plating performance. Longer rinse-time options and the optimized 3-bay water rinsing systems after each process step, as well as the ability of multiple dipping and alternating barrel rotation steps reduce water consumption.

By individually managing each product carrier, various plating sequences can be run simultaneously, depending on the base material and final surface requirements. This allows the system to operate at a fraction of the size of conventional systems and achieve a throughput of up to 21,120 tons per year.

Due to its compact dimensions and modular construction, the DynaSmart® system can be quickly and easily incorporated into existing factory lines and integrated into the production and logistics concepts of a plant's overall manufacturing process.

The DynaSmart® system's sophisticated design features also mean decreased plating line downtimes for maintenance and service. To aid in preventative maintenance, the DynaSmart® automatically reports part wear and tear to ensure the timely order of replacements.



Optimum plating results with the DynaSmart® system

Special features

- Interchangeable, standardized modules
- Automatic loading and discharging with optional noise-absorbing enclosure
- Optional systems for hydrogen de-embrittlement or post-dip applications like; sealer, top coat or lubrication
- Automatic dosing system for chemicals
- Autonomous control system within each product carrier for independent, cycle based operation
- Automatic, predictive maintenance
- Carrier maintenance in special maintenance station parallel to production

Benefits

- Faster installation time due to modularization and standardization
- Smaller environmental footprint for standard applications
- Less production downtimes for maintenance and service
- Greater flexibility due to realization of different exposition times within one cycle
- Easy process setup and best performance in combination with MKS' Atotech chemical processes

