



INNOVATIONS FOR AUTOMOTIVE INDUSTRY

Advanced Process Technology

SINGULUS TECHNOLOGIES – Innovative Technology for Automotive Industry

High-quality surfaces in metal decor are in demand more than ever in the decorative sector. First-class appearance and flawless surfaces are often crucial to convince customers of the quality and exclusivity of the product.

SINGULUS TECHNOLOGIES has already sold complete production lines of the type DECOLINE II for the finishing of three-dimensional plastic components. The solution for the finishing of three-dimensional components for the automotive industry is unique. The DECOLINE II allows chromium (VI) free coating of parts for the automotive industry. The term "chromium (VI)" refers to the hexavalent form of the chromium ion. The most important hexavalent chromium compounds are chromium trioxide (CrO₃), the chromates (CrO₄²⁻) and the dichromates (Cr₂O₇²⁻). In the production of chrome-plated parts, the poisonous heavy metal chromium VI in waste water and special waste is produced in previous production processes.

The DECOLINE II from SINGULUS TECHNOLOGIES integrates vacuum metallizing (sputtering) plus all coating and pretreatment steps into a single production process, and transports the components through all process stages automatically. The POLYCOATER vacuum coating system is a core component of the entire line. The POLYCOATER is conceived as an inline machine and operates according to the vacuum sputtering principle. Compared to laborious batch production, which involves evaporation deposition, this solution automates the production process and its short cycle times thereby substantially reducing production costs. For optimum, controlled coating of all sides, the components can be rotated in the vacuum. The use of UV lacquers and the scope for recycling these minimizes emissions of environmentally harmful substances.

The DECOLINE offers especially to the automotive industry the prospect of further cost savings, and markedly simplifies logistics. In the shape of the new DECOLINE II SINGULUS TECHNOLOGIES is able to offer the industry an environmentally friendly process and significant benefits for simplifying their production processes. The environmentally friendly, low-cost coating technology clearly sets the DECOLINE II apart from traditional coating processes, thus checking off all the boxes for revolutionizing traditional product finishing. The line concept can be used for two and three-dimensional components with a wide variety of characteristics.



Brilliant layers on 3-dimensional automotive parts

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THIN FILM
DEPOSITION

SURFACE
ENGINEERING

THERMAL
PROCESSING

WET
CHEMICAL

SINGULUS TECHNOLOGIES – Innovations for New Technologies

SINGULUS TECHNOLOGIES builds innovative machines and systems for efficient and resource-friendly production processes. SINGULUS TECHNOLOGIES' strategy is to take advantage of its existing core competencies and to expand these further.

The core competencies include vacuum coating, surface processing, wet-chemical and thermal production processes. The company offers machines, which are used worldwide in solar, semiconductor, medical technology, consumer goods and optical disc. For all of the machines, processes and applications SINGULUS TECHNOLOGIES harnesses its automation and process technology expertise.