

DECOLINE II Compact Technical Data

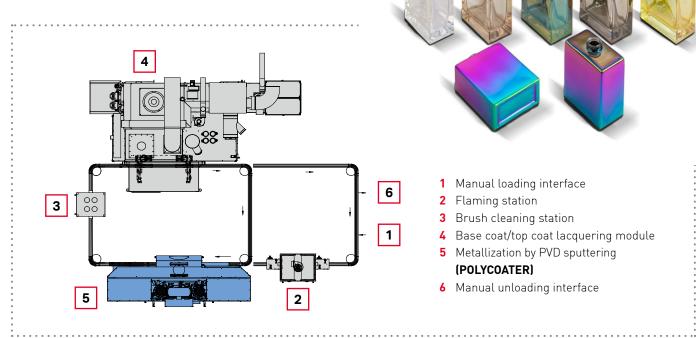
Uptime	90 %
Yield	95 - 99 % (depending on paint and substrate shap
Max. substrate dimensions (mm)	Ø 68 / 130 Ø 90 / 130
Cycle time	12 s/carrier
Throughput	Up to 5,400 substrates/h
Length of installation	~ 8 m
Width of installation	~ 12 m
Height of installation	~ 4 m

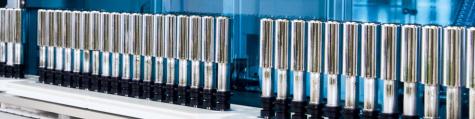
Other layouts on request

DECOLINE II Compact

THE "LITTLE SISTER" FOR LOWER PRODUCTION DEMANDS

The SINGULUS TECHNOLOGIES DECOLINE II Compact has a significantly reduced footprint while still offering the most critical process steps for multi-layered coating of 3-dimensional substrates. It is the right choice for companies with reduced output expectations. Due to its modular design the installation can later be upgraded to a full standard DECOLINE II. The DECOLINE II Compact version is also individually adjustable in terms of module placement to meet your company's specific floor space needs.





Your direct contact:

www.singulus.com



SINGULUS TECHNOLOGIES AG

Hanauer Landstrasse 103 63796 Kahl, Germany Tel. +49 6188 440-0 sales@singulus.de www.singulus.com

SINGULUS TECHNOLOGIES (SHANGHAI) Co. Ltd. Tel. +86 21 61073997

sales@singulus.cn

SINGULUS TECHNOLOGIES

Guangzhou Office Tel. +86 13822138376 sales@singulus.cn

SINGULUS TECHNOLOGIES FRANCE S.A.R.L.

Tel. +33 3 89 31 11 29 sales@singulus.fr

SINGULUS TECHNOLOGIES INC. Tel. +1 860 683 8000 sales@singulus.com

South America SINGULUS TECHNOLOGIES LATIN AMERICA LTDA.

sales@singulus.com.br

South East Asia

SINGULUS TECHNOLOGIES ASIA PACIFIC PTE LTD. Tel. +65 67411912

sales@singulus.com.sg

Taipei Office SINGULUS TECHNOLOGIES TAIWAN LIMITED Tel. +886 2 8692 6996 sales@singulus.com.tw











SINGULUS TECHNOLOGIES - Thin-Film Coating and Surface Treatment

SINGULUS TECHNOLOGIES develops and assembles innovative machines and systems for efficient thin-film coating and surface treatment processes, which are used worldwide in the Photovoltaics, Semiconductor, Medical Technology, Packaging, Glass & Automotive as well as Battery & Hydrogen markets.

The company's core competencies include various processes of coating technology (PVD sputtering, PECVD, evaporation), surface treatment as well as wet-chemical and thermal production processes.

SINGULUS TECHNOLOGIES sees sustainability as an opportunity to position itself with innovative products. In the focus are environmental awareness, efficient use of resources and avoidance of unnecessary CO_2 pollution.

SINGULUS TECHNOLOGIES attaches great importance to responsible and sustainable corporate governance.





Inline Production Systems for 3D Parts

DECOLINE II & POLYCOATER

GREEN METALLIZING

Inline Production Systems for Sustainable Coating of 3D Parts

Various sectors, such as cosmetic packaging, caps and closures, hardware, automotive interior or medical barriers benefit from the flexibility of the DECOLINE II along with the POLYCOATER. By itself or integrated into the DECOLINE II, the POLYCOATER offers the opportunity to finish diverse products with a wide range of metallic colors. Brilliant layers allow for individual design and add uniqueness and market appeal to any product. SINGULUS TECHNOLOGIES offers the second generation of inline coating solutions for fully automated handling and coating of 3-dimensional parts. From loading to packaging, the process is fully automated and not a single manual step is necessary – at a cycle time of only 0.4 seconds per component. The new DECOLINE II by SINGULUS TECHNOLOGIES is able to provide the industry with an environmentally friendly coating system while simplifying their production processes.







Cost

Effective





Green Metallizing

Chrome (VI)free

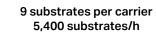
Process

Process



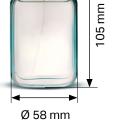


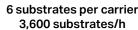




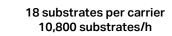












Ø 18 mm

4 substrates per carrier 1,440 substrates/h

Ø 90 mm



SYSTEM ADVANTAGES

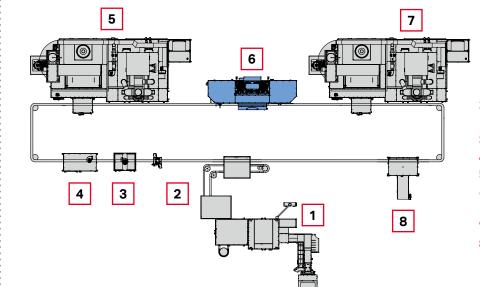
- » Reproducible layer uniformity thanks to part rotation and multiple cathodes during sputtering process
- » Wide process window for different substrate shapes and layer thickness due to L-form cathode arrangement
- » Different materials can be metallized and lacquered, e.g. plastics, glass, metal or ceramics
- » Separation of pre-treatment, lacquering, metallization, and part handling via flexible asynchronous pallet-based transportation system
- » Flexible and robust substrate transportation system allows for flexible floor layouts and future expansion
- » Consistent flow conditions from process step to process step allowing each production module to be optimized
- Universal handling and clip system along with programable robot mounted spray guns allows for flexible and fast change of production
 Compact spray coating module, capable for primer/base coat, tint and/or
- scratch resistant top coat lacquersSuitable for high solid, water-base, and solvent-based UV paint formulations
- » Up to two 6-axis paint robots with multiple independently controlled spray guns in each painting booth for the application of different paint colors or types
- Sustainable and low-maintenance thanks to innovative three-stage filter system and most efficient material consumption
- » Closed design of the coating booth with fresh air supply via ceiling filter with air supply fan
- » Paint drying and curing with four IR radiation fields and UV units at two different positions

DECOLINE IITechnical Data

Uptime	90 %
Yield	95 - 99 % (depending on paint and substrate shape)
Max. substrate dimensions (mm)	Ø 68 / 130 Ø 90 / 130
Cycle time	Down to 6 s / carrier
Throughput	Up to 10,800 substrates/h
Length of installation	~ 19 m
Width of installation	~ 12 m
Height of installation	~ 4 m
Other layouts on request	

Independent installation of POLYCOATER possible

h ...



......

- Sorting and loading module
- 2 Pre-cleaning station and deionization
- 3 Flaming station
- 4 Brush cleaning
- **5** Base coat lacquering module
- 6 Metallization by PVD sputtering

(POLYCOATER)

- 7 Top coat lacquering module
- 8 Unloading