

# High-speed Cleaning for Sensitive Components with High Cleanliness Requirements

## EcoCvolta

Modular continuous processing cleaning system for sensitive components with high particulate and film-type cleanliness requirements.



The EcoCvolta is the right cleaning solution for any location where sensitive components are manufactured in large quantities and strict cleanliness requirements are in place.

Thanks to its continuous-flow design, it can be seamlessly integrated into high-volume production lines. The system can easily be connected to cleanrooms or cleanroom facilities to prevent the components from becoming recontaminated.

Thanks to its wide range of process modules, the EcoCvolta can handle a variety of cleaning tasks.

- + Ideal for high-volume production lines:**  
thanks to the continuous flow principle
- + Very short cycle times:**  
from 0.5 to 10 seconds for maximum productivity
- + High cleaning performance:**  
for particulate contaminants ranging from 50 to 300 µm
- + Modularly configurable:**  
for various cleaning processes and requirements.
- + Cleanroom integration possible:**  
to prevent recontamination.



## TYPICAL REQUIREMENTS FOR PROCESS AND COMPONENT GEOMETRY

- Component dimensions: max. 1,000 x 270 x 150 mm (other dimensions available upon request)
- Material thickness: 0.050 to 20 mm (other material thicknesses available upon request)
- Material: Coated and uncoated materials; stainless steel or titanium (other materials available upon request)
- Contaminants: particles, stamping oils, emulsions, burrs, flash burrs, unknown film-like contaminants
- Cycle times: 0.5 seconds to 10 seconds
- Particulate residue requirements: maximum particle size 50 µm to 300 µm
- Filmic cleanliness requirements: 38 to 48 mN/m, free of oils and molecular oil components
- Free of certain prohibited substances on the surface, such as phosphorus, detergents, surfactants, sulfur, silicones, silicon, and any organic compounds.

## POSSIBLE PROCESSES FOR CLEANING BIPOLAR PLATES:

- High-pressure spray cleaning
- Low-pressure spray cleaning
- Steam cleaning
- Hydrocleaning
- CO<sub>2</sub> Blasting
- Laser cleaning
- Atmospheric low-energy plasma
- High-energy plasma processes
- Thermal oil removal in an inert gas atmosphere
- High-quality insulation to reduce heat loss
- Simple and safe machine operation: 12-inch color display with intuitive icons
- Ease of maintenance: large roller shutters for optimal, space-saving access to service-related components



Reliable cleaning, degreasing and preparation of the surface of bipolar plates is a prerequisite for coating and functional processes in fuel cells.

## CONTACT

Ecoclean GmbH  
 Hans-Georg-Weiss-Str. 10  
 52156 Monschau/Germany  
 info.monschau@ecoclean-group.net

[www.ecoclean-group.net](http://www.ecoclean-group.net)

**SBS ECOCLEAN GROUP**