

COPRA Plasma Sources Ensure sustainability of your Plasma Assisted Coating Productions

The COPRA LS-Source is an ICP Plasmasource which perfectly suites to existing batch coaters. The design of the source dimensions could be fully customized making it a perfect allround solution for both existing and future new industrial coaters.

"COPRA" Sputter Solution

Versatile Coating Concept enabling different coating solutions as:

- Plasma Assisted Magnetron Sputtering two step high depostion rate process for low loss optical filter, and high end decorative market applications
- PVD - PECVD coating solution for high rate DLC applications

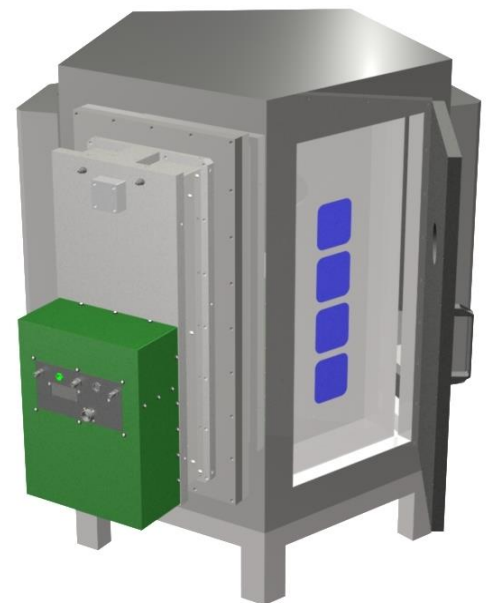
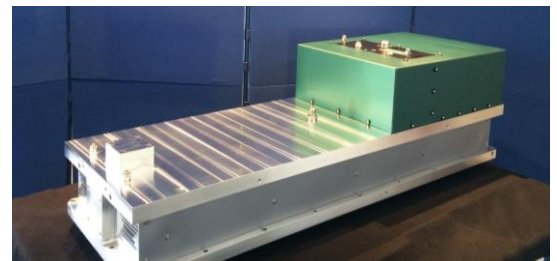
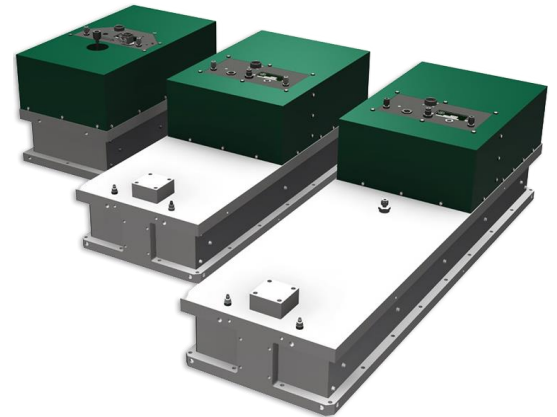
How does the COPRA work?

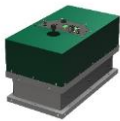

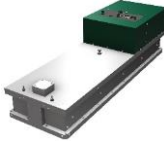

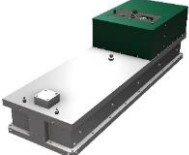
The COPRA plasma source transforms the reactively sputtered thin oxide layers into stoichiometric layers thus providing also highly efficient plasma cleaning, etching and preconditioning of the substrate surfaces. The high dissociation degree of the gas provided by the source technology is not increasing the process temperature thus enabling also temperature sensible processes.

The thin reactively sputtered layers carrying a controlled deficit of oxygen are successively oxidized by the COPRA Source with reactive oxygen. Any other reactive gases are also possible. The COPRA Sources are optimized to achieve higher throughput sputter rates through their excellent and fast oxidation properties for high industrial Needs.

Advantages by using the COPRA

- Excellent homogeneous distribution of the ion current density
- Ion energy and Ion current density are independently settable thus providing high process scalability for the desired substrate dimension
- Works with all gas types and reaches dissociation degrees of up to 90% and plasma densities $>1 \times 10^{12} \text{ cm}^{-3}$
- Sources can be customized in nearly every dimension in order to perfectly fit on exisiting machines
- No adjustment in pressure range is required—COPRA can also work in normal sputter pressure ranges
- Reproducibility of process characteristics



LS Series	LS358x156-GR	LS670x202-GRPE	LS950x201-GRPE	LS1100x201-GRPE	LS1300x201-GRPE
					
Plasma Opening	358x156 mm	670x200 mm	950x200 mm	1100x200 mm	1300x200 mm
Pressure Range	2×10^{-4} to 1×10^{-2} mbar	5×10^{-4} to 1×10^{-2} mbar	3×10^{-4} to 1×10^{-2} mbar	3×10^{-4} to 1×10^{-2} mbar	3×10^{-4} to 1×10^{-2} mbar
RF-Power (max.)	5 kW	5 kW	6 kW	6 kW	6 kW
Substrate width (dynamic)	300 mm	600 mm	850 mm	1000 mm	1200 mm
Plasma	neutral beam	neutral beam	neutral beam	neutral beam	neutral beam
Frequency	13,56 MHz	13,56 MHz	13,56 MHz	13,56 MHz	13,56 MHz
Body	AL	AL	AL	AL	AL
Process gas	almost any	almost any	almost any	almost any	almost any
Operation pure O ₂	YES	YES	YES	YES	YES
Matching	via remote control CRC	via remote control CRC	via remote control CRC	via remote control CRC	via remote control CRC
Integrated Matchbox	YES	YES	YES	YES	YES

*pressure, power & distance dependent



Get in touch!

Should you have any questions regarding our products please feel free to contact us directly. We are pleased to receive your specific request and find an adequate solution which perfectly fits to your needs.

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