



OMEGA™ 1000

CO₂ Integrated Spray Cleaning Module...

Omega™ 1000 is a tabletop CO₂ Spray Cleaning tool that easily integrates into a wide variety of cleaning systems. While the Omega™ 1000 is the most basic module in the Omega™ cleaning family, it offers all of the features required for the most stringent spray cleaning needs. The patented independent adjustment of solid CO₂ particle generation and thrust are incorporated into this single-channel tabletop cleaning workhorse.



OMEGA™ 1000 Applications:

- Particle removal;
- Fingerprint / thin film removal;
- Surface Preparation for Bonding;
- Optical Surface Cleaning Prior to Coating;
- Manufacturing residue removal prior to painting;
- Medical Devices;
- Aerospace;
- Micro-electronics.

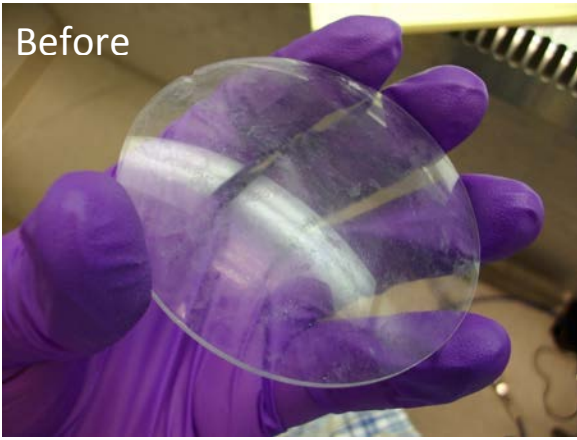
Omega™ 1000 provides independent control of both the propellant and CO₂, providing wide latitude in configuration of the clean spray. This system can be configured with a wide range of cleaning nozzles designed for:

- Cleaning of delicate microelectronic parts;
- Removal of sub-micron particles;
- Removal of general manufacturing residues at a distance of 150 mm;
- Everything in-between.

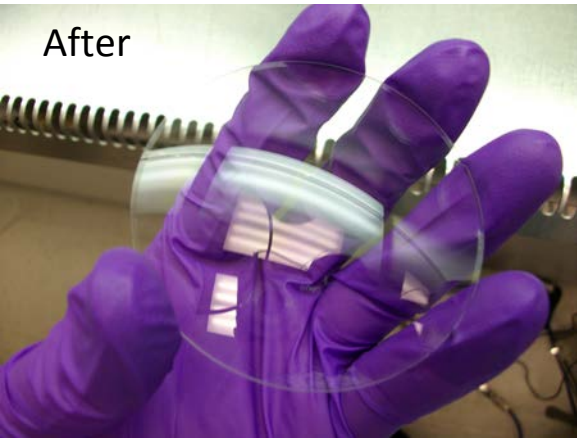
Installation is fast: hook up LCO₂ source, propellant source, and you are cleaning. System is configured with a front panel manual switching (foot or hand) or remote connector.



Before



After



Advanced Integrated Spray Cleaning Technology is an innovative development in solid phase carbon dioxide (CO₂) spray cleaning technology. A small quantity of liquid phase CO₂ is injected into a capillary tube and is condensed into a solid phase. This process creates a dense mass of solid phase particles having variable size, density and apparent hardness. Condensed CO₂ is injected and mixed with a heated and pressure-regulated inert propellant gas to form a homogenous cleaning spray mixture having both a controllable spray composition and cleaning energy. Dense particles of solid CO₂ impact the substrate at high velocity to generate a high shear stress on surface contaminants and deliver a chemically active solid phase, providing efficient and effective removal of inorganic residues, organic thin film contaminations, and particles from critical substrate surfaces.

Benefits

Removes particles:

Removes particles of all sizes and types – sub-micro hard particles of concern in the HDD industry, residues and dusts generated by manufacturing and packaging processes.

Removes fingerprints:

Removes fingerprints, thin films, and light oil contaminants from manufacturing and assembly operations.

Clean-In-Place:

Products don't have to be removed, cleaned and returned to the production line - resulting in reduced human interaction, higher throughput and decreased cost-of-ownership. Cleaning delivered to point of generation/need.

Eliminates Hand Wiping:

Touch-free non-condensing cleaning, requiring no hand wiping.

Non-Abrasive:

CO₂ particles won't damage most surfaces – hardness less than that of fingernail.

Portable:

Tabletop unit can be installed into many different manufacturing environments.

Electrical Requirements	110V – 50/60Hz, 10A
Cleaning Agent Supply	Liquid CO ₂ , 850 psi / 70°F, 5.9 MPa / 21°C
Propellant Supply	GN ₂ , CDA Gas, 60-125 psi; 0.4 – 0.86 MPa
Spray Temperature	0 - 115°F; -20 – 40°C
Workspace	320D x 438W x 143H

OMEGA™ Add-ons and Adjuncts:

- Ultra-Filtration Option, cut diameter of 0.003 µm;
- Atmospheric CO₂ plasma technology generator;
- Environmental Control and ESD Control Systems;
 - Custom SmartSpray™ Parking Garage;
 - Tertiary Integrated Spray™ with solvent;
 - Distributed CSG Module Option;
 - Extended length delivery lines;
 - CO₂ Condenser / Purifier;
 - Custom Applicators.



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