



OMEGA™ 3000

CO₂ Integrated Spray Cleaning Module...

Easily integrates into a wide variety of cleaning processes. Connect up to four discrete nozzles to your selected automation system to provide precision cleaning of parts from every angle or in specified locations for maximum efficiency. The Omega™ 3000 is capable of cleaning dust, debris, and light oils from plastic, metal or glass parts. The spray cleaning module requires only a small footprint and retrofits on existing automation lines. The Omega™ 3000 filters and condenses CO₂ from distant storage tanks saving on money and waste removal.



OMEGA™ 3000 Highlights:

- Integrates into existing process.
- Runs on two channels.
- Adaptable to array of nozzle systems.
- Configures with automation end effectors.
- Monitoring of system parameters
- Remote communication.
- Filters & condenses gaseous CO₂.
- Fast installation.

Installation is fast with a single, rear panel I/O connector, integrated single-point-of connection facilities and available casters. 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. System can be standalone or a turn-key process. Optional temperature monitor attachment allows for adjustable spray to maximum cleaning settings.



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OMEGA™ 3000 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, waterless, “dry” cleaning process.

Non-Abrasive:

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

Reliable:

Omega™ 3000 cleaning module can be installed into many different manufacturing environments and run for extended periods of time.

CO₂ Integrated Spray Cleaning Technology is an innovative development in the application of solid phase carbon dioxide. A small quantity of liquid CO₂ is injected into a capillary condenser tube and condensed into a solid – a patented process called “capillary condensation”. This process creates a dense mass of solid phase particles having variable size, density and hardness. The solid CO₂ is injected and mixed with a heated, pressure-regulated inert propellant gas to form a homogenous cleaning spray mixture. Particles of solid CO₂ impact the substrate at high velocity to produce a high shear stress on surface contaminants, providing efficient and effective removal of inorganic residues, organic thin film contaminations, and particles from critical substrate surfaces.

Electrical Power	200-240V, 50/60 Hz, 30 AMP
Drive Air / Propellant	0.41 – 1.03 Mpa (60-150 psig) @ 112-1020 slpm (4-36 scfm)
Cleaning Agent Supply	Liquid CO ₂ , 850 psi / 70°F, 5.9 MPa / 21°C
Dimensions	508mm / 20in. (W) x 863mm / 34in. (H) x 685mm / 27in. (D)

OMEGA™ 3000 Add-Ons:

To accommodate the widest possible applications and budgets, the Omega™ 3000 is available with ancillary options/add-ons:

- Ultrafiltration Package - .003 micron CDA, .003 micron CO₂
- Hose Assemblies greater than 25 ft / 7.5 m
- Integrated Spray Temperature Monitor
- Robot Mounting Kit
- Additive Injection
- Custom Spray Applicators
- Atmospheric Plasma Combinational Treatment