

PowerSno™ VP ELITE

High-Productivity Precision Cleaning System

Features and Benefits

- Most Economical Precision CO₂ Spray Cleaning
- Practically Maintenance Free
- Vector Pro™ High-Performance Micronized CO₂ Spray Technology
- LightSPEC™ Spray Quality Monitoring Technology
- PurCO₂ LCO₂ Recharger Module
- Single Channel – Multi-nozzle Spray Applicators



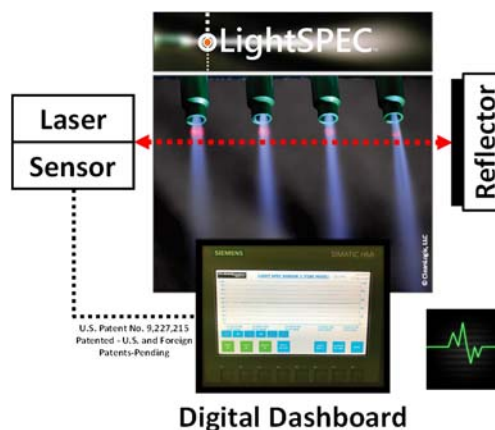
PowerSno™ VP ELITE
High-Productivity Spray Generator

Economical

PowerSno™ VP ELITE is economical. A simple remote contact closure actuates the CO₂ cleaning spray. The Vector Pro spray technology uses only 4 lbs CO₂/nozzle/spray-hour! A panel mounted propellant regulator combined with internal factory presets are used to optimize spray cleaning power for a particular application. A full color SprayLOGIX™ Digital Dashboard for monitoring the health of the spray cleaning system.

Smart

PowerSno™ VP ELITE is smart. The system utilizes exclusive LightSPEC™ spray quality monitoring technology to continuously (or intermittently) determine that the CO₂ spray system is operating nominally and under control. LightSPEC™ literally monitors the “heartbeat” of the system. Out-of-spec operating conditions including CO₂ injection pressure and flow rate, and propellant spray pressure – are reflected in the LightSPEC™ absorption spectrum displayed on the SprayLOGIX™ Digital Dashboard.



Monitoring the Health of the Spray System with Light!

Stable

PowerSno™ VP ELITE is stable. The standard system ships with factory-optimized internal operating presets for propellant gas temperature, CO₂ particle injection rate, and spray health condition alarms. During operation, a pneumatic injector (only moving part requiring periodic PM) precisely and continuously injects and disperses micronized CO₂ particles into the heated propellant gas to ensure the quality of the cleaning spray. Within a stable system operating environment – for example facility compressed air and CO₂ supply quality and capacity are

operating within recommended limits – the practically maintenance free PowerSno™ VP ELITE reliably delivers a consistent cleaning spray 24 hours a day, 7 days a week. However, unforeseen factory fluids supply issues can and do arise from time to time. If internal system or system environment conditions become unstable, PowerSno™ VP ELITE alerts the operator on the Digital Dashboard and communicates this information to the factory-tool-line using the system’s built-in I/O connector or Profinet port.

Flexible

PowerSno™ VP ELITE is flexible. PowerSno™ VP ELITE is a modular system for high productivity, remote and multiple machine tool-line adaptations. A standard integrated system supports one or more concurrent spray applicators – arranged as desired. Standard and custom spray applicators can be provided to meet your spray cleaning application and tool-line integration requirements. Finally, we offer several different **PurCO₂™** CO₂ process fluids supply systems that ensure consistent quality and capacities of pure gas or liquid CO₂, or clean dry air for your cleaning system. Request our **PurCO₂™ CO₂ Purification and Delivery System Tech Brief** for more detailed information.

Specification

PowerSno™ VP ELITE system is offered with several applicator and remote-actuation configurations to adapt to virtually any stand-alone, tool-integrated, or production line-integrated cleaning application. All systems employ our patented spray technology.

Operation and control configuration: manually adjusted propellant regulator with internal factory-presets (and controllers) for propellant temperature, CO₂ injection pressure (provided by the PurCO₂ Recharger module), and system alarm conditions with single-channel multi-nozzle spray applicator. The system is factory-configured to produce a hard micronized CO₂ particle spray with optimum cleaning power for a particular application.

PowerSno™ VP ELITE system incorporates patented Vector Pro™ spray technology which provides unsurpassed spray stability, economy, and performance. This system can provide precision cleaning capability at multiple points in the factory, in one or more manufacturing processes and tools, or directly on the production line.

Modular Configuration: PowerSno™ VP ELITE system features rack-mount style modules mounted in a powder-coated aluminum chassis. Each module features a rear panel for main power, fluids supply (CO₂/CDA or GN2), factory-tool-line communications, and remote control.



PSVP ELITE Front Panel



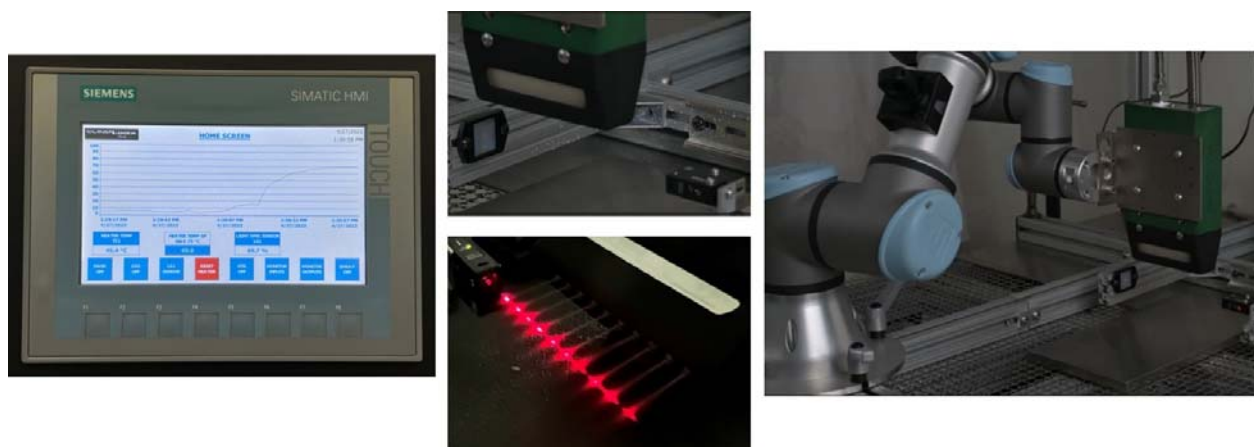
PSVP ELITE Rear Panel



PurCO₂ Recharger Module

Individual modules are easily accessed from the front and sides and can be quickly removed for preventive maintenance and component replacement operations.

SprayLOGIX™ Digital Dashboard: The SprayLOGIX™ Digital Dashboard features a full-color touch-screen display panel for *Main Operation and LightSPEC™ Spray Monitor*. The front panel features a lighted on/off power switch, EMO switch, USB port, Profinet communication port, and manual propellant regulator.



SprayLOGIX™ Digital Dashboard and LightSPEC™ Spray Density Sensor

Vector Pro™ CO₂ Composite Spray™ Generator (Propellant and CO₂ Particles): Precision propellant gas pressure regulator (40-125 psi), internal propellant temperature controller (preset to between 70-250°F), and preset CO₂ injection pressure (1200 psi). PowerSno™ VP ELITE system uses either a high-pressure liquid or gas CO₂ supply, with optional condenser-chiller system upgrade to PurCO₂ Recharger module (750-850 psi/50-70 deg. F inlet optimal).

Spray Configurations: PowerSno™ VP ELITE system can accommodate up to ten (10) spray nozzles in a single or multiplexed applicator configuration using a single spray channel (i.e., spray applicators actuate simultaneously).

For example, Vector Pro CO₂ composite spray nozzles can be configured as five (5) dual spray applicators, two (2) 5-spray spray applicators, or as one (1) clustered or linear ten (10) spray applicator. Virtually any orthogonal spray pattern can be used.



**Vector Pro™
Wide Spray Applicator**

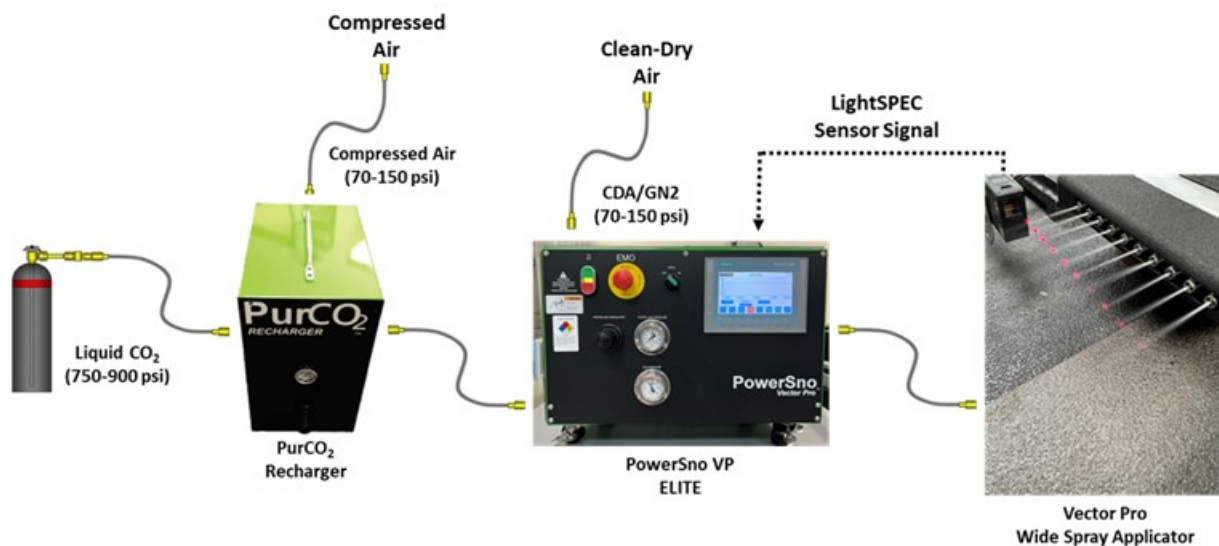
System Requirements

**Model PSVP Elite Spray Generator
PurCO₂ Recharger Module**

Electrical Power	120 VAC, 1 Phase, 50/60 Hz, 10 Amps (other power options available)
Clean Dry Air (CDA/GN2) - Spray	30-40 scfm, 85 °F maximum, 70-125 psi (Continuous Demand)
Compressed Air (CA) - Recharger	15-25 scfm, 85 °F, 70-125 psi (Periodic Demand for PurCO ₂ Recharger)
Liquid Carbon Dioxide (LCO₂)	40 lbs./spray-hour Liquid CO ₂ (max), 75 °F maximum, 1100-1200 psi
Spray Actuation	24 VDC contact closure
Communications	Profinet, LightSPEC alarm condition output
Footprint	24" (W) X 24" (D) X 16" (H) with rubber feet or caster wheels

Specifications are subject to change without notice.

Example Integration Scheme



OPTIONS AND ACCESSORIES

- PurCO₂ Recharger Upgrade: CO₂ Condenser and External Recirculating Glycol Chiller
- Mobile Tool Cart
- Customer 80/20 Extrusion Mounting Frame
- Custom 3D Designed/Printed Applicators and Fixtures
- Point Source Spray Ionizer
- PurCO₂™ CO₂ Purification and Delivery Systems
- Particle-Plasma™ Module (shown right)
- Robotic Automation
- CleanCell™ Custom HEPA-filtered Cleaning Cells
- Stainless Steel Chassis
- Class 100 Clean Build/Design
- Ultrafiltration (0.003 Micron)
- CO₂ Safety Monitor for Confined Spaces



Particle-Plasma™



Clean Manufacturing, *Reimagined.*

clean
imagineering™

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