

Vape-Jet

Fully Automatic
Cartridge Filling Machine



Vape-Jet

Vape-Jet is a fully automatic fluid dispensing machine specifically designed for use with highly viscous oils commonly found in the THC and CBD manufactured products industries.

INNOVATIVE HARDWARE



Low Temperature Dispense

Vape-Jet achieves unrivaled temperature control of product with 3 independently programmable heat zones, preserving terpenes and reducing degradation of your distillate, rosin, CO2 or other extracts. Proportional-integral-derivative (PID) algorithms eliminate temperature variations during the vape cart filling process.



Nitrogen Assisted Pharmaceutical Pump

Pressurized nitrogen enables the fluid-handling system of Vape-Jet to easily dispense even the highest viscosity products. Third-party calibrated and certified, the pumping mechanism can quickly and accurately fill any volume from 0.001ml to 5.0ml into your vape cartridges, pods, or capsules.



Clean in Place

The Vape-Jet system can be fully cleaned in place using your choice of solvents. Simply fill the reservoir with your cleaning solution, and run the cleaning wizard through the GUI. The full cleanup process takes less than 10 minutes, and is almost fully software automated.



Direct to Tray Filling

The machine vision alignment system enables Vape-Jet to automatically fill cartridges directly as shipped in foam trays, without the need to manually transfer cartridges into and out of a jig. This feature results in 200 fewer touch points per tray as compared to jig-load systems. Simply unbox the cartridges, place into the Vape-Jet, and click the dispense button to fill!



Machine Learning

The Vape-Jet is the smartest vape filling device on the planet. Using collected cartridge data and photos, the Vape-Jet automatic vape cart filling software visually inspects for cartridge defects prior to filling, providing traceability down to individual cartridge verification.



Safe Fluid Path

The Vape-Jet fluid path is made entirely from PTFE, PCTFE, Viton, Borosilicate glass, stainless steel, and ceramic. Swagelok fittings are used for all connections, and the pump dispensing valve is precision machined ceramic.

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POWERFUL SOFTWARE



Multiple Configurations

The Vape-Jet system is capable of saving 1,000 different configurations. A master of efficiency, the Vape-Jet system allows each configuration to be loaded or updated as needed. Switching between different profiles is simple – and accommodates different product attributes and vape cart styles.



Data Reporting

Batch tracking and traceability are vitally important in today's rapidly changing environment. Vape-Jet's robust reporting and inspection capabilities are included out-of-the-box. Cartridge filling operations, and pre and post fill inspection photos can be recorded and viewed as necessary.



Web Interface

The Vape-Jet system is operated from any internet capable device, including MacOS and Windows desktops, laptops, tablets and phones (iPhone & Android). Multiple Vape-Jet systems can be run from a single device – allowing a single operator to keep up to five systems going at full capacity.



Center Post Avoidance

Pre-Inspection of cartridges is now obsolete, Vape-Jet easily detects and avoids bent center posts. The Vape-Jet can even be configured to flag and skip over vape cartridges that are out of specifications.



Machine Vision Alignment

The Vape-Jet eliminates the need for costly and time consuming manual labor processes, reducing labor costs. Using our patent-pending machine vision alignment system, you can fill distillate vape carts directly into foam shipping trays. The machine vision system is fully software configurable, and is compatible with a wide variety of cartridges. Optional center-post avoidance identifies the optimal fill location for every cartridge, and decreases labor needed for pre-inspection/alignment.



Live Support

Help and support are built directly into the Vape-Jet interface. The GUI includes a live-chat window that connects you directly with the Vape-Jet engineer support team. At your request, the Vape-Jet support team can remotely view system configurations, operational data, and error logs to quickly troubleshoot issues.



Active Deployment

Every aspect of the Vape-Jet is software-controlled, and improvements are available via internet updates. The Vape-Jet team regularly adds new features and custom modifications to the software system – including those received as direct customer feedback.

Vape-Jet

Electrical Specifications	
Input Voltage	110V-125V
Wattage	200W (Idle) – 800W (Max)
Max Amperage	8A
Plug	NEMA 5-15 (Type B)
Fluid Path Specifications	
Pump Type	Syringe Pump /w Mechanical Valve
Pump Drive	Stepper Motor /w Optical Encoder
Pump Speed	Adaptive variable speed dispense. Minimum 300ms dispense stroke.
Pump Accuracy @ 30% Stroke	< .1% (Every pump is independent cal lab tested and results provided.)
Pump Repeatability @ 30% Stroke	< .1% (Every pump is independent cal lab tested and results provided.)
Pump Resolution	1/3000th of 100% syringe stroke length.
Syringe Materials	Borosilicate Glass, PTFE
Valve Materials	Ceramic / 316 Stainless Steel
Hose Material	PTFE
Needle Material	316 Stainless Steel
Reservoir Material	316 Stainless Steel /w Viton Gaskets
Fittings Material	PTFE / 316 Stainless
Injector Assembly Heater	
Power	150W
Type	Resistive Cartridge Heater inside Aluminum Block
Temp Range	25C – 95C
Accuracy	+/- 1C
Pump Assembly Heater	
Power	150W
Type	Resistive Air Radiator Element
Temp Range	25C – 75C
Accuracy	+/- 5C

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Air Flow	35CFM Max
Reservoir Heater	
Power	300W
Type	Silicone Heater Pad
Temp Range	25C - 95C
Accuracy	+/- .5C
Mechanical Specifications	
Max Travel	360mmx410mm
Max Speed	150mm/second
Repeatability / Accuracy	0.078 / 0.091 mm
Max Force @33mm/sec	55N
Motor Type	NEMA-17 1.2A
Operational Parameters	
Operating Temp	20°C ~ 35°C
Storage Temp	10°C ~ 45°C
Cartridges per Hour	300 - 1000
Cartridge Compatibility	Any circular cartridge with more than .25mm alignment space after needle insertion. (CCell, 510, Etc.)

