

MVP Vacuum Stoppering System

The Cozzoli MVP provides reliable, semi-automatic, batch insertion of stoppers, plungers or plugs into filled containers. This high performance machine is the perfect companion to the Cozzoli F329 Series liquid filling machines.

A pneumatic stopper transfer mechanism is operated by the cycle control unit. This cycle control unit governs all functions of the assembly operation according to operator selected parameters. Unlike other systems, the vacuum chamber and all container handling parts are completely autoclavable, designed to withstand temperatures of 450° F (232° C). The entire 316L stainless steel chamber can be steam sterilized for maximum cleanliness.

Operating Principle:

The operator places the filled syringes into a rigid stainless steel barrel rack, tops it with a transfer plate loaded with pre-packaged or individual stoppers, then places the assembly into the MVP's, vacuum chamber. The MVP's control unit then regulates the user's vacuum, nitrogen and compresses air utilities which are programmed to remove entrapped air from the product, purge the chamber and transfer the stoppers into the syringes. Final venting to ambient air pressure forces the stoppers into contact with the liquid for a secure, reliable seal.



Control Features

Vacuum Only and Vacuum/Purge/Vacuum Switches: By setting selector switches on the front panel, the operator can choose to run the system using vacuum only, or with a vacuum/nitrogen purge/vacuum sequence.

Vacuum Level Settings: Internal adjustments allow the user to preset the necessary level of vacuum. The rest of the stoppering cycle will not activate until this level is attained.

Purge Interval (Preset Internally): When Vacuum/Purge/Vacuum is selected and the initial vacuum state is complete, nitrogen automatically feeds into the chamber for the pre-set interval to displace any possible remaining gasses. A low-nitrogen detection feature automatically stops the cycle and warns if nitrogen pressure is inadequate.

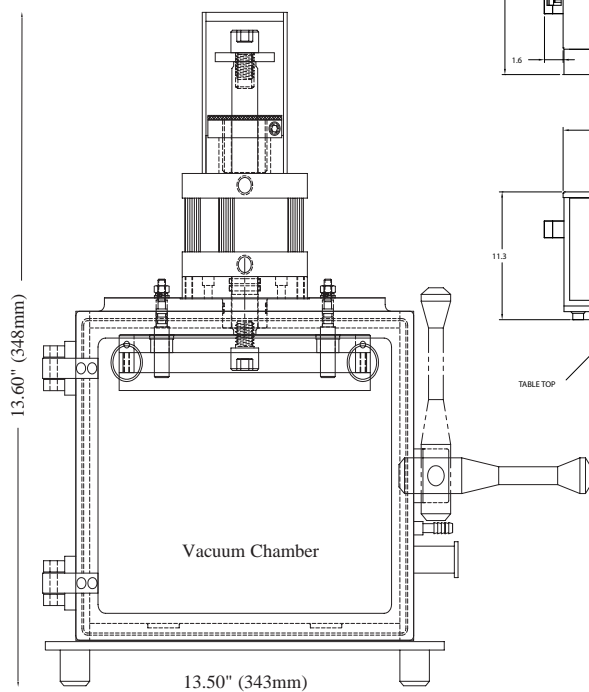
Second Vacuum Interval Timer: A digital timer on the front panel sets the interval necessary for complete stopper transfer.

Stoppering Speed: This internal adjustment allows independent control of the advance/retract action of the transfer punch-plate.

Stoppering Force: The force of the pneumatic transfer punch-plate that transfers stoppers into the containers is monitored and controlled by an air pressure gauge and regulator on the front panel.

Venting: Once set, all of the above vacuum, purge and stopper transfer function are automatic. When completed, the system automatically vents to ambient air pressure and the stoppers are forced into final seating position. The rack of containers is then ready for removal.

MVP Specifications



VACUUM CHAMBER DIMENSIONS

Interior	Inch	mm	Working Area
Width	8.00	203	7.5 x 9.0" (197 x 229mm)
Depth	9.25	235	
Height	8.25	210	

Exterior	Inch	Mm	Interior Volume
Width	11.00	280	36 Cu.Ft./10.2 Liters
Depth	13.00	330	
Height	13.75	348	

Cycle Control Unit Dimensions:

20.25"W x 20"D x 12.25"H
51.58cm W x 50.80cm D x 31.11cm H

OPTIONAL FEATURES

Additional Transfer Punch-Plate Assembly
Additional Transfer Stopper Transfer Plates
Additional Container Handling Rack
Electrical Configuration other than 115V, 60HZ, 1Ph
MVP-ST with Smaller, Taller Vacuum Chamber
Dimensions: 6.5"W x 4.75"D x 14.25H ID
MVP-DT with Narrower, Deeper Vacuum Chamber
Dimensions: 6.5"W x 17.25"D x 14.25"H ID
Dual Stage Vacuum Pump
Exhaust Filter for Vacuum Pump
Replacement Element for Exhaust Filter
MVP-CNTL – Controller only
MVP-STCH – ST Vacuum Chamber Only, No Controller
MVP-DTCH – DT Vacuum Chamber Only, No Controller
Spare Parts Kit
IQ/OQ Validation Protocol
Factory Acceptance Test Protocol
PQ Performance Qualification Protocol

STANDARD FEATURES

316 Stainless Steel Vacuum Chamber
115V, 60Hz, 1 Ph Electricals
Transfer Punch-Plate Assembly
Available Patterns 5x6, 6x7, 8x8, 10x10 or 10x16
Stopper Transfer Plate
Available Patters 5x6, 6x7, 8x8, 10x10 or 10x16
Container Handling Rack
Available Patterns 5x6, 6x7, 8x8, 10x10 or 10x16

REQUIRED SERVICES

Electrical: Grounded 3-wire
Standard: 110-120V, 60 Hz, 5A, 1 Ph
Optional: 220-240V, 50 Hz, 3A, 1 Ph
100-110V, 50 Hz, 6A. 1 Ph

Pneumatic Supply: 60 PSIG (4.2Kg/cm²), .25" (6.4mm) Inside Diameter supply line connects to control unit.
Air Consumption: .04 cu. Ft. (1.2 liter) per cycle at 60 PSIG (4.2kg/cm²) connects to control unit.
Vacuum Supply: In-plant system providing vacuum at 28" (71 cm) Hg. Connects to control unit's tri-clover connection.)
(If in-plant vacuum is not available, a 500 liter/minute vacuum pump will suffice for most applications.)
Nitrogen Supply: Regulated supply for the nitrogen purge feature.
Maximum pressure limited to 3 PSIG (0.2 kg/cm²)
Sterile Filters: Provided by the user.

Cozzoli Machine Company is an international leader in the design, manufacture, distribution and service of precision cleaning, filling and closing systems in stand-alone or monoblock format. Since 1919 our company has been serving the pharmaceutical, biotechnology, diagnostic, cosmetic, and chemical industries.