

Vial/Ampoule Washing Machine VW-100



PMS VIALWASH, semi-automatic vial/ampoule washing system, use carriers equipped for direct spraying while the water pressure is equally divided among the stationary spraying nozzles. Washing process is performed carrier by carrier as each carrier is manually loaded onto and unloaded from the machine. The construction is mainly of stainless steel and other corrosion-free material. Machine cover is made of clear plastic to provide process visibility and prevent water vapor spreading out from the machine. Pipelines, pumps, filters and instrumentation are in sanitary execution.

Theory of Operation

Direct jet spraying through nozzles is used whereby each vial/ampoule on carriers is placed on its individual jet. This jet stream completely clean internal surface of vial/ampoule. Meanwhile, another set of stationary spray nozzles are fixed to the top of washing chamber for external surface cleaning. The consumption of washing fluids is minimized by re-circulation through filters where practical.

Basically, water for the washing cycle is heated up by electrical immersion heating element in the tank of the washer and maintain at the set of temperature throughout the washing process. The system is capable of washing various sizes of vial, simply by changing vial carriers. Process sequence and timing are adaptable to meet users' requirement.

Application:

- Ampoules
- Vials
- Syringe

Washing Step General Vial washing process comprises of 6 sub-steps:

Step 1: Rinse Spray tap water onto internal and external surface to sweep away soluble dirt or loosely adhered particles with D.I. water

Step 2: Dry Supply clean compressed air to remove water droplets at internal surface of the vial

Step 3: Wash Clean internal and external surface with D.I. water

Step 4: Dry Feed clean compressed air to remove water droplet at the internal surface

Step 5: Final Wash Use D.I. water to wash internal and external surface of vial

Step 6: Final Dry Supply clean compressed air to the internal area of vial

Benefit:

- GMP Compliance
- Economical power and water supply
- Compact Design
- Adaptable process timing
- Flexible for various sizes of vials

Technical Data:

		VW 100
Capacity	(vial/hr)*	2,000-3,000
	(vial/cycle)**	100
No. of carrier / cycle		1
Centrifugal Pump		2.2 kW, 3 Phases
Machine Dimension	W (mm)	830
	L (mm)	830
	H (mm)	1,3

Note

* Capacity per hour depends on desired process timing.

** Capacity per cycle depends on vial size.

Standard:

- Rectangular shape machine with stainless steel cabinet and clear plastic cover
- Dual-stage (Stainless Steel) Centrifugal Pump
- Rectangular recycled tanks equipped with stainless steel Dual-stage centrifugal pump, strainer, cartridge filter and filter housing
- Central Electrical Control Unit Pump controller, Process sequence Controller, Timer and Safety instruments
- Pneumatic Service Unit for compressed air: Air filter, Filter housing with Membrane filter element, Air regulator and Micro mist separator
- Vial Holding Carriers

Option:

- Additional fresh de-ionized or distilled reservoir for final wash
- Additional Vial Carrier
- Touch screen Controlling Unit
- Validation Document: Installation Qualification (IQ)/ Operational Qualification (OQ)