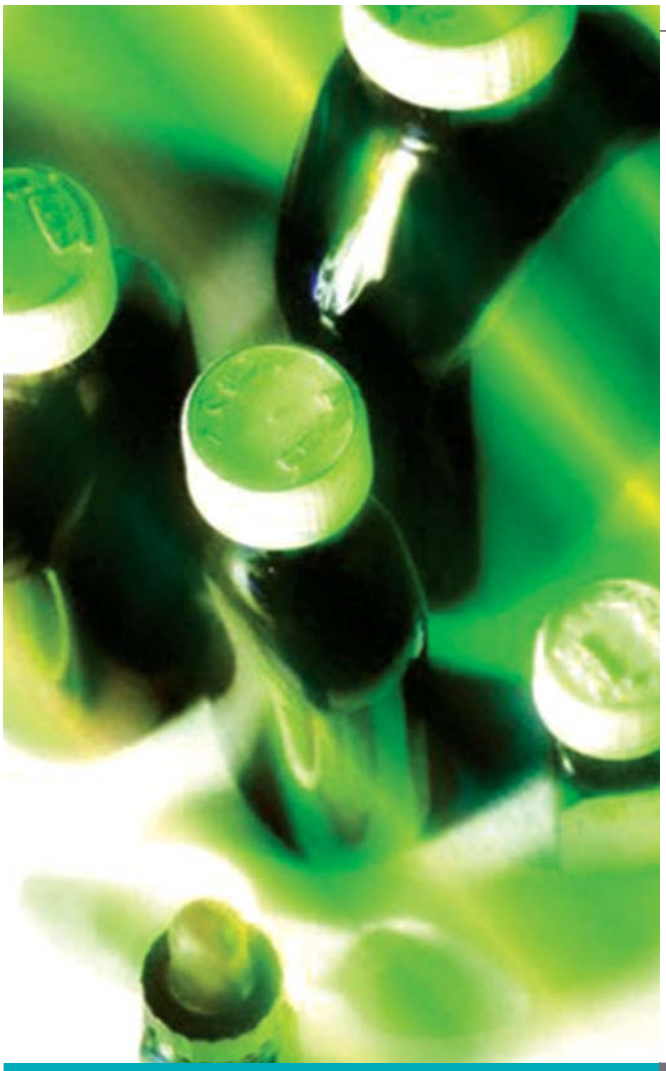

MONOBLOCK FILLING AND SEALING MACHINE

Pharmalab

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ENGINEERING SUCCESS THROUGH FOUR DECADES

Pharmalab India Pvt. Ltd. is a leading Engineering Company, with a reputation for designing, manufacturing, erecting and commissioning a variety of fabricated stainless steel process and packaging equipments. We have earned the trust of many major pharmaceutical, biotech, food & beverage, cosmetics and agro-chemical companies over the past 4 decades and currently serve their requirements through four manufacturing facilities in Ahmedabad and two in Mumbai with a combined work area exceeding 200,000 sq. ft.

MONOBLOCK FILLING AND SEALING MACHINE

- The combination of Filling & Sealing on the same machine is termed as mono-block.
- Containers are filled and sealed in an enclosed compartment
- Specially designed for high-speed outputs. (100 -220 Bottles per minute).
- Saves energy and reduces man power requirement.
- Eliminates contamination.
- Needs minimal space for installation.

1. **Filling Station:** The Filling Station consists of volumetric filling heads and a central liquid reservoir. The assembly of syringes along with the reservoir continuously rotates at requisite speeds, enabling suction of liquid into the syringe and delivery of liquid into the bottles. The speed of the machine is set as per the required output.

   The desired volume can be set by a centralized volume adjustment mechanism and provision for finer adjustments is provided on individual syringe.

   All the contact parts are made of SS 316. The reservoir is made of SS 316 and fed continuously with the liquid through an external source. The liquid in-feed is controlled automatically by sensing the level in the tank through a float switch which actuates pneumatically operated solenoid valve.

2. **Sealing Station:** Filled bottles are automatically transferred to the capping/sealing station through star wheels. Caps are picked up automatically before the bottles are conveyed to the capping heads. The sealing station consists of ROPP capping heads with a Head Constraint Device. The pressure on the bottle can be reduced and thereby ROPP capping can be done both on glass and PET bottles without any change to the basic machine. However, this is subject to the strength of the bottle. The height of capping head can be adjusted to suit the bottle height. Motorized height setting with Auto cut-off mechanism enables ease of height adjustment.

   The height of the cap feeding hopper and chute are also automatically adjusted to suit the bottle height. Suitable interlocks are provided to stop the machine when the hopper/cap feeding chute is empty.

3. **Conveyor:** The bottles are conveyed on the SS Slat conveyor. The conveyor is provided with UHMWPE wear strips. It has an independent drive for flexibility in adjustments. The height of conveyor from the ground is suitable to match other machines' specification.

4. **Base & Drive Assembly:** The base is fabricated from properly ribbed rolled steel. It is well covered with elegant SS cladding and it has spacious doors to facilitate maintenance. The drive assembly is enclosed in the base, and all openings on top of the base are covered and sealed so that, when washed, water does not enter the drive cabinet.

   The nozzles enter the bottle to prevent foaming. It also facilitates filling of frothy liquids. This is done by a special mechanism provided to lift the bottles upwards.

   Acrylic Guard with aluminum anodized structure covering four sides of the machine is a standard supply feature.

5. **Controls:** These consist of variable frequency AC drives for conveyor motor and main motor, PLC, MCB for protection, along with necessary contactors and interlocks, which are housed in the control cabinet as an integral part of the machine.

   The man-machine interface (MMI) with a 2 line display is provided on the machine. All parameters can be set in terms of Bottles Per Minute. The bottle counter is a standard feature. The various faults are displayed on the MMI.

   In case of any fault, a dome lamp, which is visible from a long distance, flashes and appropriate message is displayed on the MMI.

MONOBLOCK FILLING AND SEALING MACHINE

OUTSTANDING FEATURES

- Machine features help to comply with cGMP standards.
- PLC controlled with status display on MMI.
- Machine safety Interlocks.
- Centralized Volume Adjustment mechanism.
- Suitable for glass bottles/HDPE/PET containers.
- Also suitable for pre threaded plastic caps.
- Special mechanism for holding bottles during transfer and accurate nozzle centering.
- Pre-programmed cycle and accessories for CIP (Optional).
- Special PICK & PLACE attachment designs available (Optional).

TECHNICAL SPECIFICATIONS

Model	VR-80	VR-120	VR-150	VR-180	VR-240
Filling Heads	4 Heads	6 Heads	8 Heads	12 Heads***	16 Heads***
Type of Caps	4 Heads ROPP/ Screw	6 Heads ROPP/ Screw	8 Heads ROPP/ Screw	8 Heads ROPP/ Screw	8 Heads ROPP/ Screw
Container Dimensions	30 mm -70 mm dia 55 mm 200 mm ht	30 mm -70 mm dia 55 mm 200 mm ht	30 mm -70 mm dia 55 mm 200 mm ht	30 mm -70 mm dia 55 mm 200 mm ht	30 mm -70 mm dia 55 mm 200 mm ht
Rated Output	70 BPM*	100 BPM*	130 BPM*	170 BPM*	220 BPM*
Conveyor Height	850 mm Adjustable 50 mm	850 mm Adjustable 50 mm	850 mm Adjustable 50 mm	950 mm Adjustable 50 mm	950 mm Adjustable 50 mm
Length**	3365 mm	3365 mm	3665 mm	3660 mm	3660 mm
Width**	1250 mm	1250 mm	1400 mm	1700 mm	1900 mm
Height**	2600 mm	2600 mm	2600 mm	2550 mm	2550 mm
Power	2 HP	2 HP	3 HP	5 HP	5 HP
Air consumption	1 CFM@ 5 Bar	1 CFM@ 5 Bar	1 CFM@ 5 Bar	1 CFM@ 5 Bar	1 CFM@ 5 Bar

* Indicated output are for typical water like liquid filled in 100 ml glass bottles.
Filling volume range 10 ml-500 ml (with change part).
Filling accuracy ± 1% of filled volume.

** The actual dimensions are subject to change to suit site condition/application.

*** 1 litre filling is available with select models.
Custom built machines for higher speed are available.

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Pharmalab India Private Ltd., Kasturi, Sanghvi Estate, 3rd floor, Govandi Station Rd, Govandi (E), Mumbai 400 088, INDIA.
Tel.: +91-22-66 22 9900 • Fax: +91-22-66 22 9800 • E-mail: pharmalab@pharmalab.com • Website: www.pharmalab.com