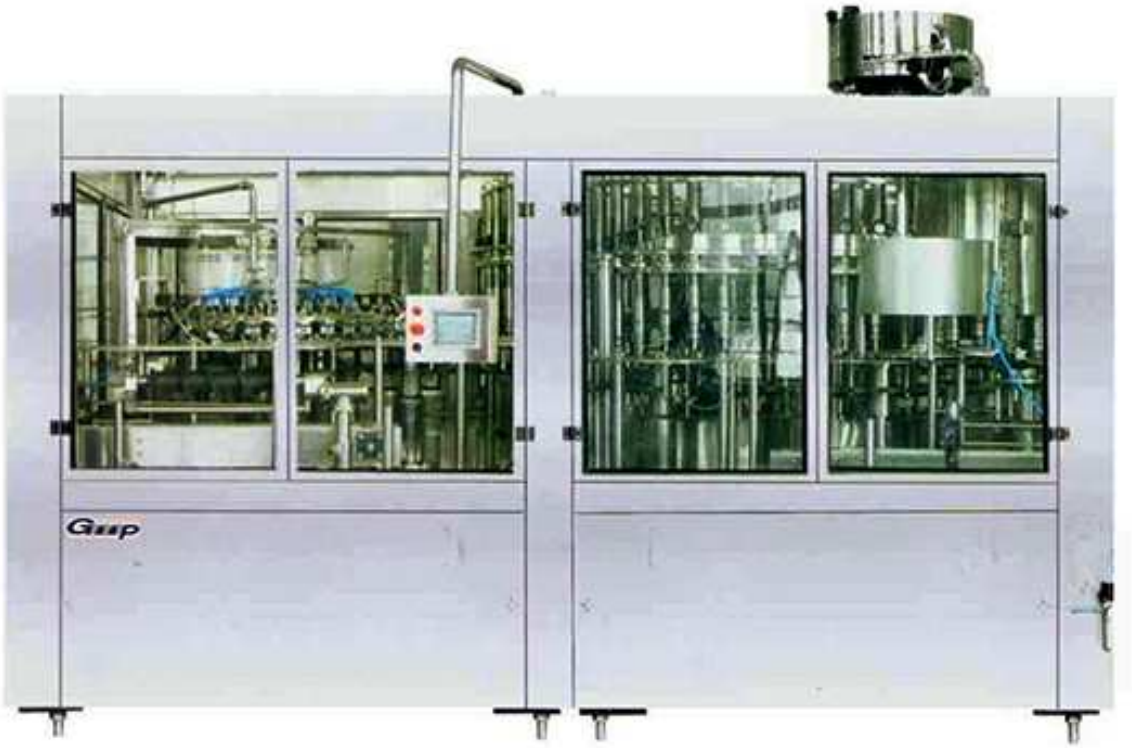
Automatic Trio-block Rinsing, Filling & Capping Machine GRFC-60



Automatic Rotary Rinsing, Filling & Capping Machine is versatile, self-supported on stainless steel leg with height adjustable adjustment system. The machine is precision built on sturdy welded steel frame completely enclose in stainless steel sheet and doors are providing to facilitate the servicing of machine, work on gravity filling principle with rotary motion. The unit is made compact, versatile and enclosed in stainless steel elegantly matt finish body. 'No container No filling & No Sealing' system arrangement is standard features of the machine.

The main drive of the machine, conveyor drive & cap-feeding bowl consist of A/c Motor with synchronized variable A/c Frequency Drive.

INFEED AIR CONVEYOR (With Air Blower)

In-feed air conveyor fitted with high pressure air blower with filter fitted on the suction side. This conveyor feeds empty bottles into the in-feed rotor by neck holding mechanism of the Trio-block machine. The conveyor is mounted at right angles to the Trio-block machine.

AUTOMATIC ROTARY RINSING MACHINE (16 HEAD)

The In-feed Rotor is transfer the bottle from In-feed Air Conveyor to the Rinsing rotor. The bottles are automatically picked up by the rinse rotor from in-feed rotor with neck holding & bring it to the grippers clamp. The gripper's clamps turn them upside down means inverted positions which place

the bottle mouth over the nozzle. Where the fountain type nozzle spray water in-side the bottle in series, each bottle being rinsed up to four seconds. Mechanical rinse valve provides the feature “NO BOTTLE NO RINSING”. When the bottles are held at the neck, there is no distortion of the bottle profile. At the end of the rinsing cycle, the bottle is drained of most reschedule water, before being straightened out and handed over to the filling rotor for the filler operation.

AUTOMATIC ROTATY FILLING MACHINE (12 HEAD)

The mechanical filling valves, mounted radically on the rotary filling tank, are actuated automatically by the bottles when lifted up to commence filling. Here again the bottles are held at the neck by neck holding grippers which ensures precise valve centering. Consequently, there is no bottle damage or water wastage during the filling operation. The main machine drive motor has variable speed A.C. Drive, by which the machine speed can be varied depending upon the bottle size to be run. Three position probe fitted in the filling tank automatically regulates the machine speed based upon product inflow, using a panel mounted PLC. “NO BOTTLE NO FILLING” system arrangement is standard features of the machine.

AUTOMATIC ROTARY SCREW CAP SEALING MACHINE (6 Head)

The feed container moving on transfer rotor, this transfer rotor feed the bottle from the filler rotor to the capper rotor. The Capper Rotor bringing the container below the sealing head in the subsequent indexing part, mean while the rotating head pickup a cap from the cap star wheel which is receiving from delivery chute of cap filling bowl, where the body and the neck of the container are positioned below the rotating head, where the sealing head is performing perfect operation of sealing. The Capping adopts a unique “PICK & PLACE” mechanism for capping in conjunction with an efficient bottle anti-turn device. The bottle is held at the neck firmly during capping to produce absolutely leak proof results.

CAPPER ELEVATOR

Caps are fed into the machine by an automatic cap elevator having an S. S. 304 ground level hopper, which can hold up to three thousand caps. This hopper also an automatic agitator, which gets activated as soon as the caps stop moving inside the cap hopper. Thus, the elevator is never starved of caps. The elevator orientates and feeds caps at the desired rate to the capper rotor. Shortly before cap pickup the caps are exposed to UV light for sterilization. After capping, the bottles are .discharged on to the out-feed slate conveyor.

Technical Specifications:

Model		**GRFC-60**
Output/Hour*		2500 to 3000
Number of head/Syringe		Rinser 16, Filling 12, Capper 6
Direction of Movement**		Left to Right
Fill Size		1000 ml
Electric Specification **	Main Machine	3 HP / 415Volts / 50 Hz.
	Oriental Bowl	0.25 HP / 415Volts / 50 Hz.
	Conveyor	0.5 HP / 415 Volts / 50 Hz.
	Blower	1.0 HP / 415Volts / 50 Hz.
	Pump (Washing)	1.0 HP / 415Volts / 50 Hz.
Height of Conveyor (Air)		1400 mm to 960 mm Adjustable.

** Depends on bottle size, cap size and type of cap. ** We can supply as per customer requirements..*

Salient Features:

- 'GMP" Model based on advanced technology.
- Single Operator for Three Operations.
- Rinse – Fill & Seal cycle, fully Trio-block for total filling hygiene. The whole process is automatic.
- Bottle in-feed using high pressure air conveyor with air filter on suction side.
- Less Floor Area.
- No Contamination – as immediate sealing of filled bottles.
- Centralized Volume Adjustment System- no down time in volume settings.
- SS 316 material used for filling valves
- No Bottle –No Fill for Individual head, hence no spillages.
- Torque adjustable capping heads using PICK & PLACE provided..
- Machine is fully Neck holding by design, So no change part required for different size of bottles.
- Automatic PLC control speed regulation.
- The advanced Programmed Logic Controller (PLC) is adapted to control the machine runs automatically, air conveyor system is adopted in bottle entry section and belt conveyor system is adopted in bottle exit section, which can adjust speeds and coordinated with transducer of the main machine to make the operations of moving bottle forward steadily and reliably.
- In-feed can be linked directly with automatic blow molding machine
- Machine covered with SS 304 frame & Acrylic Doors for total filling hygiene
- Placing of Cap Feeder Outside Trio-block-avoid entering of dust in it.
- Better finish – imported polished, laminated S.S. sheet used.
- Separate variation drive to control speed of conveyor.
- Self Lubricating UHMW- PE Guide profile for Low friction wear surface, smooth and noiseless conveying.
- Fully automatic rotor to rotor transfer without any human contact. It is convenient to operate with higher automation
- Safety Guard for Operation and Protection.