

TECHNICAL DATA

MODEL: RFC-6-6-4 **AUTOMATIC RINSING – FILLING – CAPPING (RFC) MACHINE**



Mineral Water



Liquor



Flavoured Milk



Juice

(Above image is for reference purpose only)

MACHINE DESCRIPTION:

- The Automatic RFC (Rinsing / Filling / Capping) Machine is highly efficient to deliver automatic operations involving rinsing filling and capping of various products such as water, milk, carbonated drinks and juice.
- This machine is widely used in beverage, food industries etc.
- The Machine is carefully designed to meet all the necessary operational requirements.
- The Machine output Speed will be up to 30 BPM. (Speed varies with Filling volume and operator feeding efficiency or Input from Other Line Machine).
- The Machine is controlled by configured PLC with the help of HMI.

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MACHINE OPERATION:

1. INFEEED CONVEYOR / AIR BLOW CONVEYOR



- 4 Feet long infeed conveyor with S.S Guide.
- Empty bottles have to be loaded manually on this conveyer.
- The air at high pressure from a blower is used for conveying bottles supported at the neck up to the in-feed bottle transfer rotor.
- The air conveyor permits different bottle sizes to run without making any adjustments.

2. RINSING SYSTEM (6 HEAD)



- The automatic rinse rotor has spring loaded grippers mounted radially which pick up bottles one by one from the infeed transfer rotor.
- The Rinsing system washes every bottle to desired volume adopting the vent pipe.
- Empty bottles have to be loaded manually on this conveyer.
- The air at high pressure from a blower is used for conveying bottles supported at the neck up to the in-feed bottle transfer rotor.
- The air conveyor permits different bottle sizes to run without making any adjustments.

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3. FILLING SYSTEM (6 HEAD)



- The filling system fills every bottle to the desire volume adopting the vent pipe filling principle for accurate.
- The mechanical spring-loaded filling valves are actuated automatically by the bottles when lifted up to commence filling.

→ In this stage again the bottles are held at the neck by holding lifters.

4. CAPPING SYSTEM (4 HEAD)



- After completion of the filling operation, bottles are transferred to the capping rotor by the out cap picking rotor.
- In capping system, the bottles held at the neck firmly during capping to produce absolutely leak-proof results.

→ Caps are feed into the machine by an automatic Cap elevator with an S.S. 304 ground level.

5. OUTFEED CONVEYOR



- After the Completion of The Rinse – Fill– Seal Cycle Are Discharged On To The Outfeed S.S. 304 Slat Conveyor.
- The Bottles Are Visually Inspected Against Fluorescent Background Light for Detection of Particles Bottles mounted on the Inspection Lamp.

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6. ELECTRICAL CONTROL PANEL

- The panel has superior quality control devices with variable speed ac drive for regulation of operating speed during production.
- All electrical motors are protected individually by overload thermal relays for safety.
- The main MCB has inbuilt ELCB. which safeguards against live contact externally.
- The panel clearly marked cam switches indicating functions for ease of operation.
- A detachable remote-control device is provided for facilitating maintenance and brief test runs.

MACHINE CONSIST OF

- 4 Feet In-feed Conveyor.
- 10 Feet Out-feed Conveyor.
- On-line Inspection Counter.
- Shrink Tunnel for Labelling 3.
- Packaged Drinking Water/Juices in Pet/Plastic bottle with neck holding.
- Single Head Capping Unit along with Bulk Cap Feeder & dispensing unit.

LINE ALSO CONSIST OF

- 10 Feet SS slat conveyor with inspection counter.
- Online Shrink Tunnel to apply sleeves/Labels on the bottle.
- 1 HP Motor drives with heavy duty Gear Box (May vary as per your fill size).
- All contact Parts will be of S.S. 304 Grade.
- SS Covers with mirror finish.
- Acrylic Hood with safety door system.
- Imported electrical, switches, contactors etc.
- Electrical Control Panel with Output of 24VDC for timers and Valve.

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MACHINE PARAMETERS

- Main Motor: 1. HP, 1440 RPM.
- Conveyer: 0.5 HP.
- ½ 24 Vac Filling Valves: 5 NOS.
- Shrink Tunnel: 6 Kw (440 V AC).
- Filling Accuracy: +/-1%.

MACHINE FEATURES

1. MACHINE SAFETY AND MAINTENANCE:

- Machine overload Protection with Mechanical Clutch + VFD (variable frequency drive) protection.
- Oil Central Lubrication Systems.
- Instruction Manual & Indications Systems.
- Programmable Logic Controls PLC.
- Cap Hopper Elevator Type & Having Capacity of 1500 Caps at a Time.

2. PRODUCT SAFETY AND HYGIENE:

- In Feed Air Blower Conveyor S.S. 304 Air Filter
- Air conveyor with UV light.
- Bottle Catching & All-Star Wheels below the Neck Only.
- Rinsing Water Pressure Interlock.
- Filling Water Tank Low- & High-Level Interlock.
- All machine parts with CNC made.
- All material of construction S.S. 304.
- Contact parts S.S. 304.
- All machine control by programmable logic control PLC.
- Out conveyor S.S. 304, conveyor belt also S.S. 304.

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3. PLC BASE SYSTEMS FOR ACCURATE SEETING AND INTERNAL AND RUNNING DISPLAY:

- Machine Status - Running or Stop.
- Bottle Counter - Resettable.
- Bottle per Minute Display (BPM).
- All Interlocking Alarm with Siren.



4. OVERLOAD PROTECTION:

- Mechanical As Well As Electrical Overload Protection.

5. RINSING:

- Rinsing Pressure Interlock (If Rinsing Water Pressure Is Low Machine Gives Indication and Machine Will Gets Stop)

6. FILLING:

- Filling Tank Level Sensor (If Machine Filling Tank Level Is High Filling Pump Will Get Automatically Stop and If Machine Filling Tank Low Machine Gives Indication and Machine Will Gets Stop.)

7. CAPPING:

- Cap Feeder: If Cap Chute Is Full Cap Feeder Gets Automatically Stop and If Cap Feeder Is Empty Machine Gives Indication and Machine Will Gets Stop.

Note: Specification can be changed as per standard unless agreed with customer.