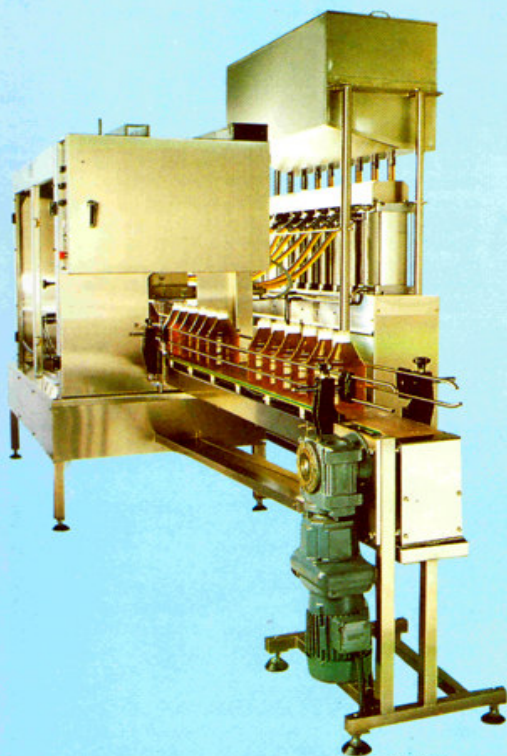
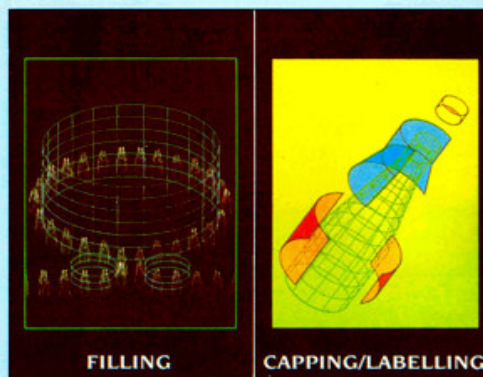


# ECF/EAC/EMC Series

*Automatic In-Line/Rotary Filling And Semi/Automatic Capping Machine*



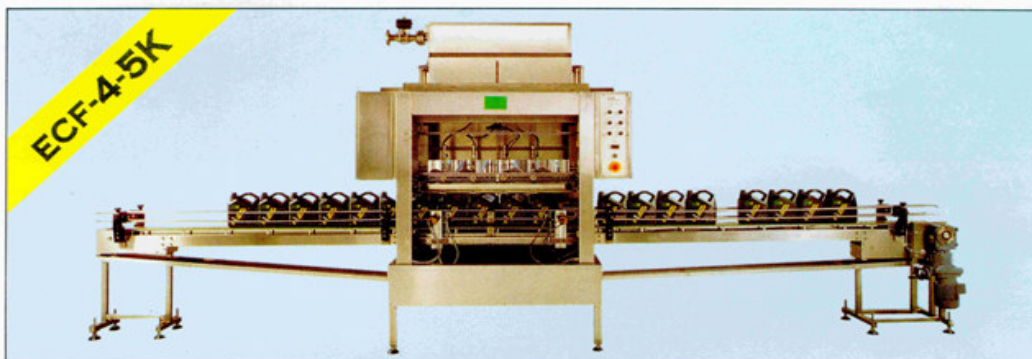
SIDE VIEW OF ENTIRE MACHINE



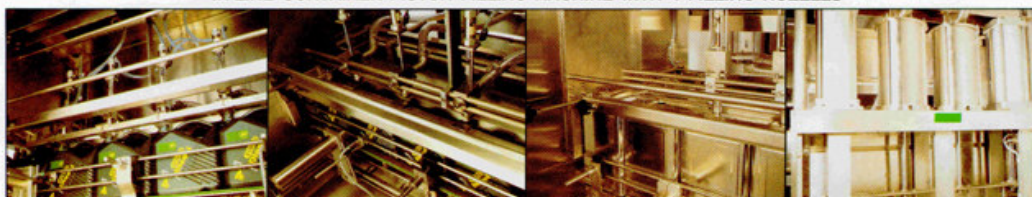
FILLING

CAPPING/LABELLING

# EMEC



IN-LINE CONTAINER PISTON FILLING MACHINE WITH 4 FILLING NOZZLES



DETAILS OF CONTAINER NECK CLAMP

AUTOMATIC DRIP TRAY

INTERNAL VIEW OF FILLING SECTION

BACK VIEW OF PUMP CABINET

As manufacturer of liquid, paste and cream piston filling machine, we have produced an extensive range of fully automatic in-line **ECF** series and rotary monoblock **EPF** series filling machine. Whichever series you may choose, they are suitable for containers in PET, PVC, plastic, glass, metal, etc to fill from fluid to viscous in food, pharmaceutical, chemical and detergent industries. The range of machines can handle nearly all fluid to viscous and foaming to non-foaming products into most shape and sizes of containers without costly change parts to meet the needs of small to large production capacities.

The pneumatically powered metering cylinders are of quick strip and easy design which provides maximum efficiency with minimum maintenance. The design is of ease of use, easy change over with reduced downtime and improved filling accuracy. Our design engineering are of the highest quality and robust manufacture with both functional and durable, entirely clad with stainless steel panels to allow base down for cleaning. It is designed as a multi purpose machine equally in the clean condition of a food or pharmaceutical factory and the harsh environment of chemical and detergent industries.

We have designed both short and long filling nozzles for performing top fill of non-foaming and bottom fill of foaming products respectively. Other options of nozzles such as multi-holes, shear blade disc valve, plug hole, etc are available to cater for filling products of different viscosity and characteristics. For each different nozzles, they are designed to fill your containers efficiently and cleanly without splashing and dripping.

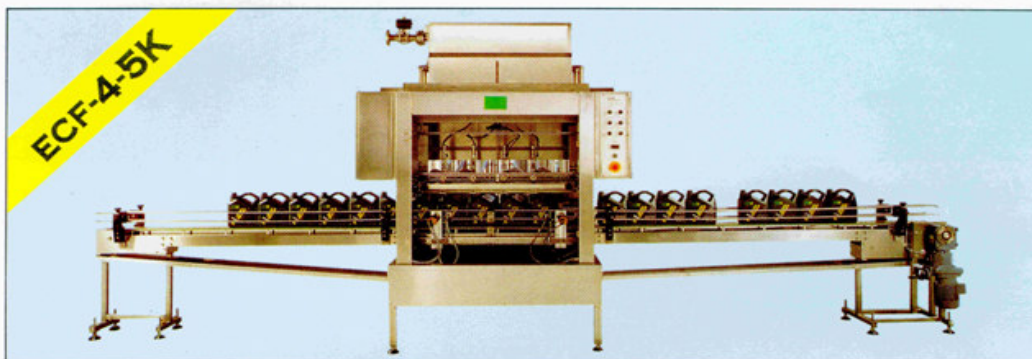
The high speed and accuracy of our filling is fully determined by the unique design of our volumetric piston pump. These pumps are available in filling volume of 0.5 to 5 litres and 10 to 20 litres, completely built in 304 stainless steel with chemical or food grade accepted seals and are connected to the product tank via three ways

valving systems. It positively controls the products through the dispensing cycle, guaranteeing an accurate fill regardless of the products and filling condition. The pump have two speeds fast/slow filling into containers to better than  $\pm 0.2\%$ . Designed with simplicity for filling volume changeover by fast and easy replacement of fixed volume preset stoppers. For maintenance purposes the contact parts can be quickly stripped and equally important, quickly rebuilt. The pumps can be completely drained of product by continuously cycled to complete drainage. Flushing through cleaning solvent and sterilization can be accomplished, by means of steam or hot and cold detergent solutions.

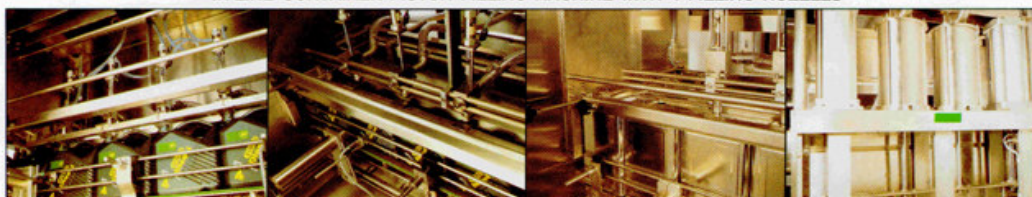
**ECF** Series fully automatic in-line volumetric piston pump filling machine are with in-line system designed for lower production demand however with highest flexibility in charges of container shapes and sizes. Its greatest advantage being able to handle great versatility of containers by just simple adjustment in the filling cabinet.

**EPF** series fully automatic rotary volumetric piston pump filling machine are with rotary system provide optimisation of the productivity and space of the plant. Its great versatility in handling of containers of various capacities, shapes or materials (plastic, glass or metal) by means of simple and rapid arrangement of few interchangeable parts. The machine employs advanced material and technologies which can guarantee the exactness of the quantity of bottle product.

To meet various production capacities, you may choose from the in-line **ECF** series or rotary **EPF** series with 4, 6, 8, 10, 12, 16, 20, 24, 30, 60 etc filling nozzles machine. We can tailor our machines to fill your containers of any volume and demand. We can further automate your entire filling lines with infeed table or turn table, capping or sealing, induction sealing, labeling automatic cartoning and complete conveyor systems.



IN-LINE CONTAINER PISTON FILLING MACHINE WITH 4 FILLING NOZZLES



DETAILS OF CONTAINER NECK CLAMP

AUTOMATIC DRIP TRAY

INTERNAL VIEW OF FILLING SECTION

BACK VIEW OF PUMP CABINET

As manufacturer of liquid, paste and cream piston filling machine, we have produced an extensive range of fully automatic in-line **ECF** series and rotary monoblock **EPF** series filling machine. Whichever series you may choose, they are suitable for containers in PET, PVC, plastic, glass, metal, etc to fill from fluid to viscous in food, pharmaceutical, chemical and detergent industries. The range of machines can handle nearly all fluid to viscous and foaming to non-foaming products into most shape and sizes of containers without costly change parts to meet the needs of small to large production capacities.

The pneumatically powered metering cylinders are of quick strip and easy design which provides maximum efficiency with minimum maintenance. The design is of ease of use, easy change over with reduced downtime and improved filling accuracy. Our design engineering are of the highest quality and robust manufacture with both functional and durable, entirely clad with stainless steel panels to allow base down for cleaning. It is designed as a multi purpose machine equally in the clean condition of a food or pharmaceutical factory and the harsh environment of chemical and detergent industries.

We have designed both short and long filling nozzles for performing top fill of non-foaming and bottom fill of foaming products respectively. Other options of nozzles such as multi-holes, shear blade disc valve, plug hole, etc are available to cater for filling products of different viscosity and characteristics. For each different nozzles, they are designed to fill your containers efficiently and cleanly without splashing and dripping.

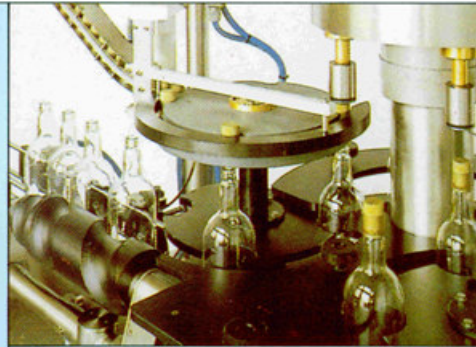
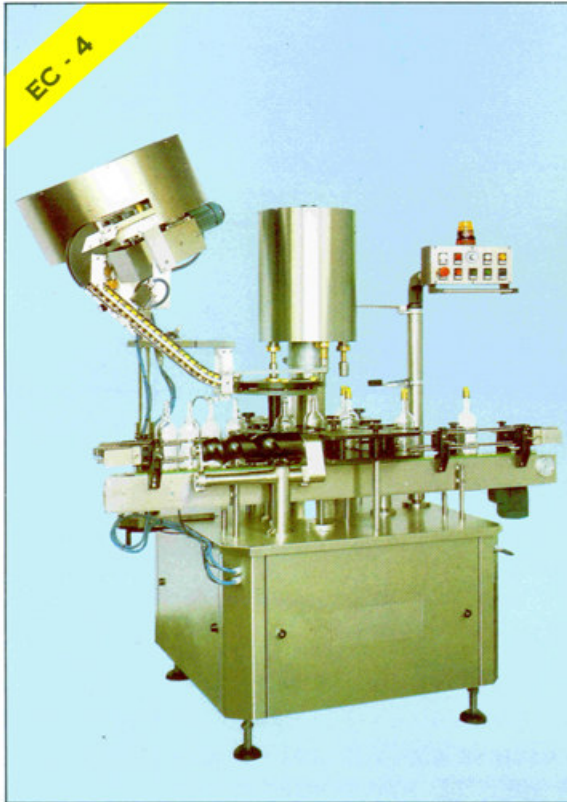
The high speed and accuracy of our filling is fully determined by the unique design of our volumetric piston pump. These pumps are available in filling volume of 0.5 to 5 litres and 10 to 20 litres, completely built in 304 stainless steel with chemical or food grade accepted seals and are connected to the product tank via three ways

valving systems. It positively controls the products through the dispensing cycle, guaranteeing an accurate fill regardless of the products and filling condition. The pump have two speeds fast/slow filling into containers to better than  $\pm 0.2\%$ . Designed with simplicity for filling volume changeover by fast and easy replacement of fixed volume preset stoppers. For maintenance purposes the contact parts can be quickly stripped and equally important, quickly rebuilt. The pumps can be completely drained of product by continuously cycled to complete drainage. Flushing through cleaning solvent and sterilization can be accomplished, by means of steam or hot and cold detergent solutions.

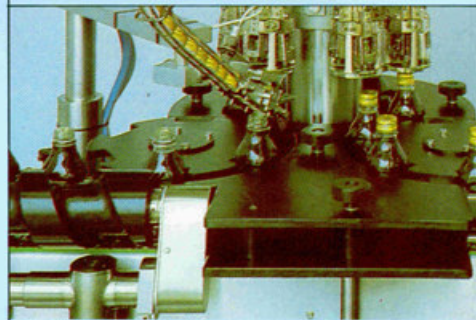
**ECF** Series fully automatic in-line volumetric piston pump filling machine are with in-line system designed for lower production demand however with highest flexibility in charges of container shapes and sizes. Its greatest advantage being able to handle great versatility of containers by just simple adjustment in the filling cabinet.

**EPF** series fully automatic rotary volumetric piston pump filling machine are with rotary system provide optimisation of the productivity and space of the plant. Its great versatility in handling of containers of various capacities, shapes or materials (plastic, glass or metal) by means of simple and rapid arrangement of few interchangeable parts. The machine employs advanced material and technologies which can guarantee the exactness of the quantity of bottle product.

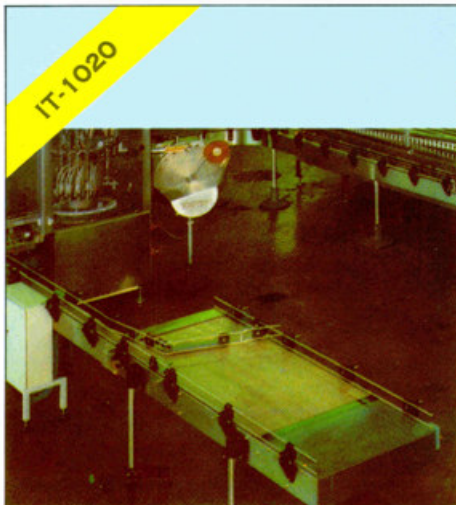
To meet various production capacities, you may choose from the in-line **ECF** series or rotary **EPF** series with 4, 6, 8, 10, 12, 16, 20, 24, 30, 60 etc filling nozzles machine. We can tailor our machines to fill your containers of any volume and demand. We can further automate your entire filling lines with infeed table or turn table, capping or sealing, induction sealing, labeling automatic cartoning and complete conveyor systems.



EC-4 AUTOMATIC CAPPER WITH 4 PRESS-ON CAPPING HEADS



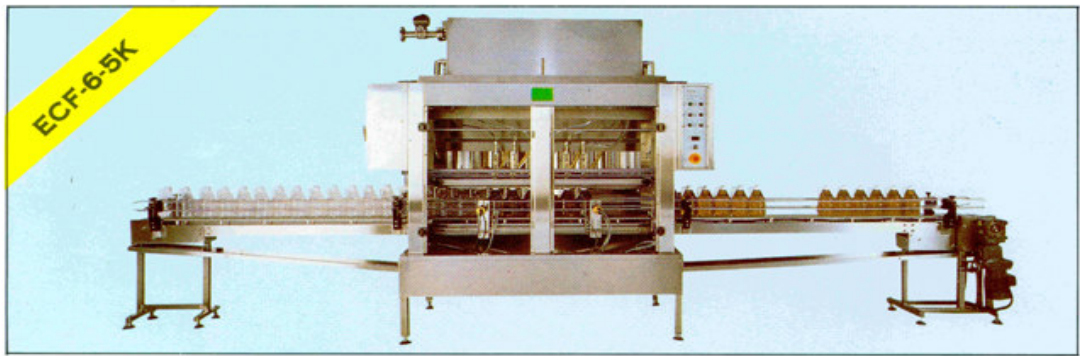
EC-6 AUTOMATIC CAPPER WITH ROLLER SEALING CAPPING HEADS



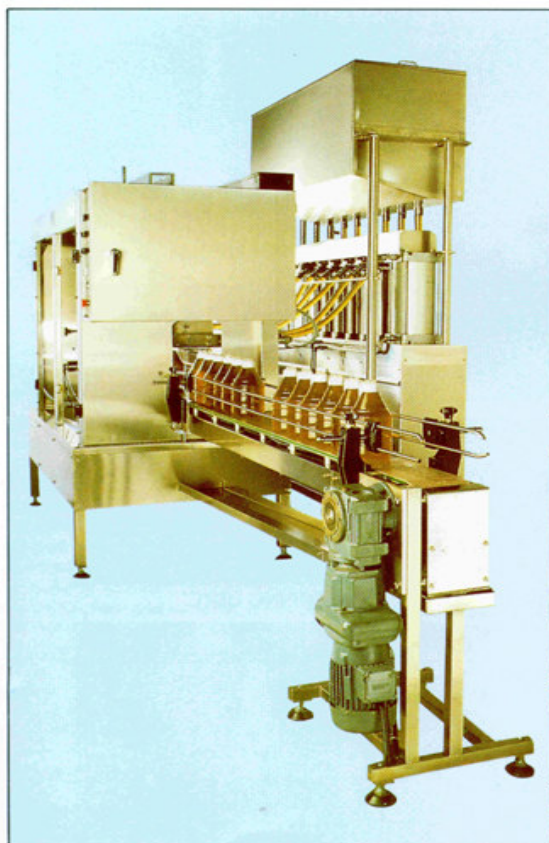
Motorised infeed table for easy placing of empty containers on top of the slat for automatic movement and transfer to the infeed conveyor.



Motorised turntable for connection to the filling machine to continuously feed containers to the infeed conveyor. It can also be connected to the end of conveyor to collect filling and capped containers.



IN-LINE CONTAINER PISTON FILLING MACHINE WITH 6 FILLING NOZZLES



SIDE VIEW OF ENTIRE MACHINE



BACK VIEW OF FILLING AND PUMP CABINETS

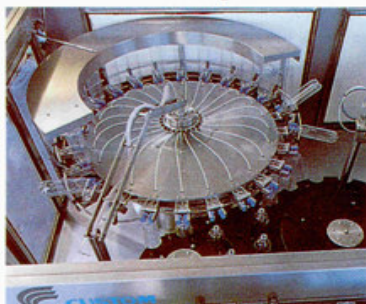


INTERNAL VIEW OF FILLING SECTION

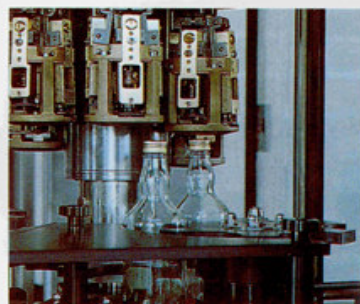
MODELS	ECF-4-5K	ECF-6-5K	ECF-8-5K	ECF-2-20K	ECF-4-20K
NO. OF NOZZLES	4	6	8	2	4
FILLING RANGE	5 lit	5 lit	5 lit	20 lit	20 lit
SPEED	1600 BPH (1 lit)	2000 BRH (1 lit)	2400 BPH (1 lit)	300 TPH (20 lit)	550 tph (20 lit)



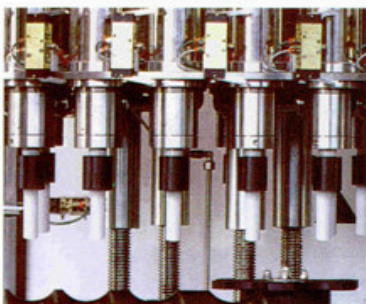
GRAVITY VOLUMETRIC FILLING MACHINES



RINSING UNIT



CAPPING UNIT

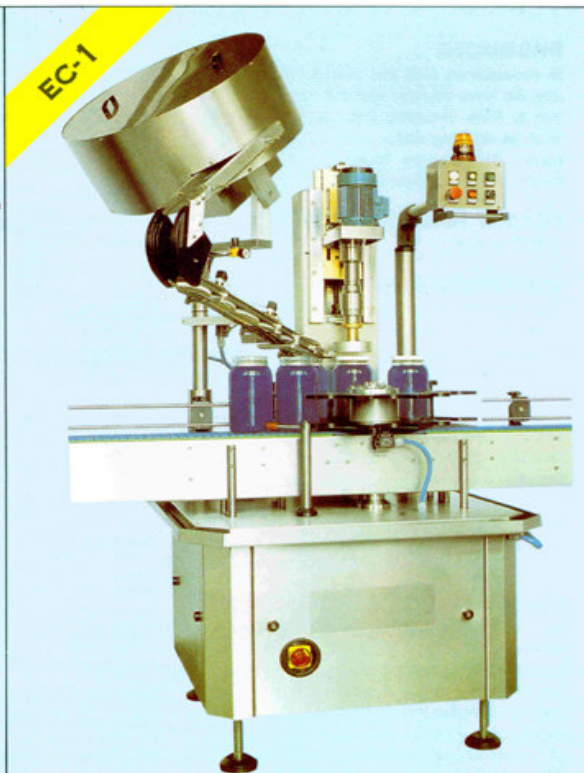
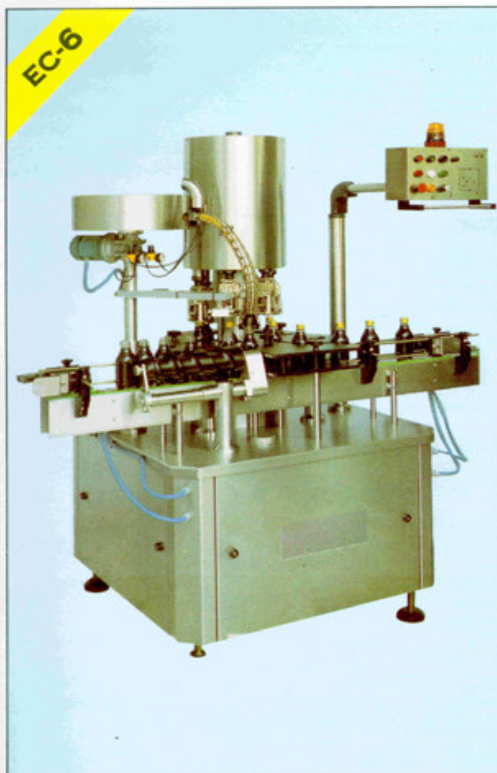


STERILISATION



BOTTLE CONVEYOR SYSTEM

MODELS	EPF-10	EPF-12	EPF-16	EPF-20	EPF-24
NO. OF NOZZLES	10	12	16	20	24
FILLING RANGE	2 lit	2 lit	2 lit	2 lit	2 lit
SPEED	2600 BPH (1 lit)	3000 BRH (1 lit)	3800 BPH (1 lit)	5000 TPH (1 lit)	6000 BPH (1 lit)



**AC** series special automatic capping machines featured a compact and functional structure. They are constructed in different versions with an hourly rate going from 1,800 to 24,000 bottles in the models of 1, 4, 6, 8, 10, 12, 16 heads. Designed and constructed in accordance with our customer's requirement, they can handle bottles/containers/flasks of any shape and size, and can apply cap liners, screw caps, pre-threaded caps, caps under pressure, ring pull caps, aluminium roll-in closures (pourers, stoppers, corks, pumping insets, etc of any shape, size and material. It can be delivered as a stand alone capping machine to be used in-conjunction with the **ECF** series or be integrated with the **EPF** series to form a monoblock machine. The capping system to be employed is designed according to the kind and size of the caps to be applied in order to guarantee a high degree of accuracy during capping. Different optional change parts are available to suit different container shapes and size and different capping heads for different types and sizes of caps.

The **AC** series are made both with a single and with several heads, are machines designed to close screw caps that can be dispensed on the fly (taken from the neck of the container) in aluminium to be threaded, in plastic or metal already threaded, by pressure onto containers in glass, plastic or metal by means of the appropriate closing heads. The caps, inserted in the descent channel by a centrifuge or pit-mechanical dispenser (depending on the technical requirements of the relative treatment), are taken by the release head at the end of the channel from the container and accompanied under the closing head by means of the entry star.

Depending on the type a cap, a variable speed unit can be fitted on the closing turret to able to increase the rotation of the screwer heads.

#### APPLICATIONS:

##### Cosmetis Products

Suitable for complex cap applications including plugging followed by orientation prior or cap application for shaped overcaps.

##### Food Products

Suitable for meeting the most arduous conditions and stringent specifications.

- Stainless steel construction for dairies.
- Corrosion protection againts salt, mustard, vinegar, etc.
- Inert gas for mustard, coffee powders, etc.
- Large diameter and/or special shaped caps.

##### Pharmaceutical Products

Suitable for sealing, plugging and screw capping on all types of containers.

- |                    |   |                           |
|--------------------|---|---------------------------|
| ● Hypodermic vials | : | plugging and sealing      |
| ● Syrup bottles    | : | sealing or sewing capping |
| ● Tablet tubes     | : | plugging                  |
| ● Infusion bottles |   |                           |

## TECHNICAL SPECIFICATIONS

### PRODUCTS

In accordance with the product viscosity and characteristics, we have several specially designed filling nozzles to fill thin to thick viscosity and foaming to non-foaming liquids such as drinking water, milk, edible oil, juices, syrup, cream, honey, jam, sauces, flavouring paraffins, shampoo, conditioner, soap, detergent, solvent, disinfectants, chemicals.

### FILLING TEMPERATURE

+ 25°C to 60°C

### CONTAINER SIZES/TYPES

The machine is designed to handle a wide range of container sizes. It can handle containers of various from 0.5 to 5 litres, various shape of round, square, rectangular, oval, etc. and materials of PET, PVC, plastic, glass, metal, etc. without any change parts.

### DIRECTION OF TRAVEL

Standard from left to right, other directions. is possible at request.

### DRIP TRAY/NECK LOCATOR

Automatic drip tray to collect any residual drip. The neck locator is incorporated into the drip tray assembly.

### FILLING NOZZLES/ADJUSTMENT

Special anti-foam and non-drip positive cut-off nozzles to suit the liquid. Long nozzles can be programmed to dive and rise whilst filling or fill into or above neck depending on product. The filling nozzles are mounted on a single rack, adjustable for centres and heights by a single hood wheel. Container neck locators are also adjusted here along with IN/OUT container stoppers on the rail in order to accommodate different shape and sizes of containers.

### CHANGE OVER

No change over parts is necessary for changes in container shapes and size. Container height is adjustable by hand wheels and its size is suit by adjusting the container stoppers.

### CONVEYORS

6 metre long x 150 mm wide delryn table top slat with raised slat band. Pharmaceutical standard stainless steel box type chasis and stainless steel support legs. Drive by motor with variable speed control.

### CONTROL

The machine functions are operated pneumatically and controlled automatically by programmable micro-processor with electronic sensing device.

### PRODUCT TANK

Centrally located product holding tanks is fabricated in 304 stainless steel, stin polish interior and exterior for mounting above piston pump inlets, complete with a lid. A pneumatic control ball valve is fitted at the tank inlet, the opening and closing of the ball valve is automatically controlled by both HIGH and LOW level detectors to maintain liquid level inside the tank. A final HIGH level detector for emergency closing and alarm trigger in the event of HIGH level detector failure.

### MATERIAL

Parts in contact with the liquid are 316 stainless steel, PTFE, and PVC hose.

### FILLING CABINET

The filling stations are neatly enclosed into a single stainless steel cabinet complete with clear plastic doors for view when closed and easily accessible when opened. The electronics and pneumatics are separated and mounted inside two stainless steel lockable cabinets. All controls are fully protected from spillage, the totally enclosed cabinet incorporating inbuilt spillage collection trough containers or hose down flushing with easy drainage and cleaning. Entire cabinet rest on heavy duty base frame with adjustable levelling feet.

### CLEANING

Normally cleaning is conducted in place and is carried out in the static mode. It incorporates a unique cleaning sump which enables effluent to be flushed through the bottle lifting platforms, ensuring spillage is virtually eliminated. Spray rings and scavenge pumps can be fitted to the system to further ensure that cleaning is effective. Cleaning may be hot or cold water flushing, using sanitising solutions, chemicals or low pressure steam is required. All liquid contact parts of the meeting assemblies are designed for easy removal, enabling a strip clean to be carried out by line operators.

### BASE FRAME

Both filling cabinet and pump assembly base frames are built in stainless steel with all sides stainless steel clad.

### FINISH

Stainless steel 304 construction on all welded parts.

### AIR SUPPLY

6-7 kg/sq.cm at 0.2 cu.m<sup>3</sup>/br, A filter-lubricator is provided.

### ELECTRICAL SUPPLY

410 VAC + 10%, -15% (factory preset) 50/60 Hz, three phase.

### AMBIENT TEMPERATURE

-5 deg C to + 40 deg C

### OPERATING HUMIDITY

Less than 85% RH (non-condensing)

## EMEC EMEC ENTERPRISE SDN. BHD.

### HEAD OFFICE SALES AND SERVICE

No. 16, Jalan Selat Selatan 22, Sobena Jaya Light Industrial Estate, Pandamaran, 42000 Port Klang, Selangor Darul Ehsan, Malaysia.  
Tel : 603-3168 6300 (Hunting Line) 603-3168 6413 Fax : 603-3168 0900  
E-mail : info@emec-corp.com Website : www.emec-corp.com

### FACTORY :

- Selangor - Lot 3119, Batu 3, Jalan Pendamar, Kampung Pendamar, 41200 Klang.
- Johor - No. 12, Jalan Cenderai 25, Bandar Baru Kota Putri, 81750 Masai.

CONTACT US  
603-3168 6300  
Tel. 603-3168 6300 Fax. 603-3168 0900

Local Representative :

Chengyang District, Chengde, Hebei, China  
Tel. 86-314-2022111 Fax. 86-314-2022112

LOCAL REPRESENTATIVE