



FITECO

**WATER AND CSD
RANGE OF
PRODUCTION**



«SOME PEOPLE SEE EXISTING THINGS AND SAY: WHY?
WE ENVISION THE FUTURE AND ASK: WHY NOT?»

Technology choice

- Filling material and container
- Most suitable technology choice

Project study

ITEM 2.1-Automatic DEPALLETTIZER,
Discharging Table, Layer and top tray
separator and Automatic Empty
Pallet Stacker automation system.

- Analysis data of production
- Machine project choice
- Safety reference regulation
- Proposal validation



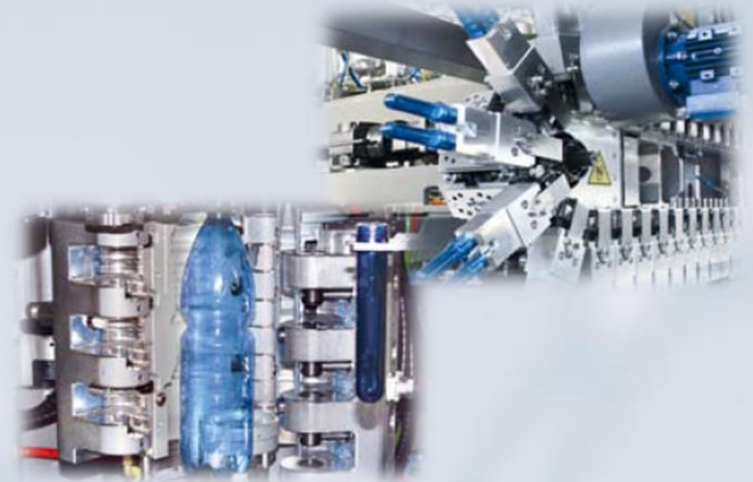
Project technical implementation

- Container making
- Container treatment
- Container Filling
- Container Closing
- Processing
- Labelling
- Final Product Controls
- Packaging
- Conveyor system

Proposal presentation

- Project proposal to the customer
- Discussion of the project
- Finalization

CONTAINER MAKING



The Fiteco-blow series of rotary stretch blow-molders ensures high performances in the stretch blow-molding of PET, PEN and PP bottles, mainly used in the “food & beverage” sector. High-tech components, low operating cost and excellent quality-price ratio make of the Fiteco-blow series the ideal solution for the production of different-sized plastic containers, featuring from the simplest to the most.

CONTAINER TREATMENT

RINSING MACHINE FOR BOTTLES CLEANING



Infeed screw, star wheels and guides are easily exchangeable for handling different bottle sizes.

Exit star wheel is fitted with a safety device which stops rinser in case of jamming.

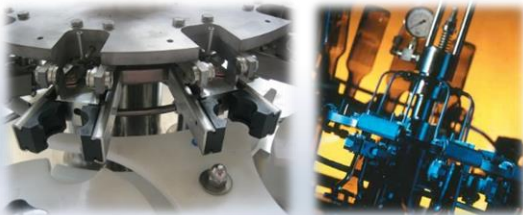
The rotary main frame carries a set of stainless steel bottle grippers.

Container positioning through fixed twist in stainless steel.

To accommodate different bottle sizes, the rotating main frame can be adjusted in height.

Treatment cycles regulation and treatment timing can be easily changed.

Treatments regulation can optimize products sterilization expenses.



Step 1 - Position and bottle taking.

Step 2 - Tipping.

Step 3 - Injection.

Step 4 - Dripping.

Step 5 - Bottle righting.

Step 6 - Release.

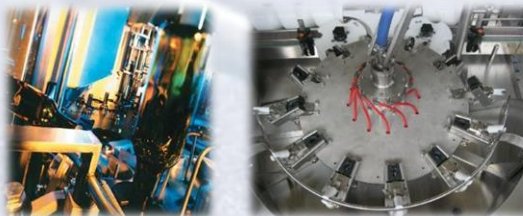


SECOND TREATMENT WITH NITROGEN

Rinsing machine can be equipped with a Nitrogen generator for the second treatment of the containers.

Nitrogen is blown into the container to evacuate the air contained, reducing the product oxidation during the filling process.

System commonly used in beer bottling to avoid the use of pre-evacuation in the fillers.



CONTAINER TREATMENT

Cleaning with steam (7 days ESL)

Container cleaning station with dry steam complete with heat exchanger to manage and maintaining the right temperature of sterilization.

Second treatment with inert gas to obtain:

- 1° keeping the container saturated with inert gas.
- 2° cooling the container before filling,



- container loading
- overturning up
- steam injection

Sterilization with peroxide (21 days ESL)

H₂O₂ spray device installed on the incoming star complete with skid for preparation sterilizing solution.

H₂O₂ activation section complete with hot air heating SKID for sterile air



- container loading- H2O2 spraying
- overturning up
- contact time
- activation
- drying phase
- overturning down
- unloading

Sterilization with acid (21 days ESL)

Sterilization station with peracetic acid in permanent contact, complete with preparation, recovery, and maintaining of the percentage of the product sterilization device.

Dripping station.

Rinsing station with sterile water complete of water sterilizer unit.



- container loading
- injection
- dripping phase
- dropping phase
- unloading
- overturning up
- contact time
- rinsing with steril water
- overturning down

STERILIZATION WITH O₃

Ozone generator equipment for mixing with rinsing water to sanitize the containers

RINSING MACHINE FOR CANS CLEANING

The twist rinser is placed in line, the cans are put on the belt manually or from rope conveyor.

Inject cleaning solution with recovery device.

After the cleaning process, the cans are put in right position, ready to be filled.



ISOBAROMETRIC FILLER

PET Bottles



Mechanical construction: very reliable and sturdy.
Isobaric filling valve for still and carbonated beverages :good consistency of fill levels.

Isobaric filling valve is positioned inside the anular tank and has few moving parts: good sanification (CIP).

Modular design of the filling head: the most comprehensive valve available includes double preevacuation, filling, level correction, snift recovery.

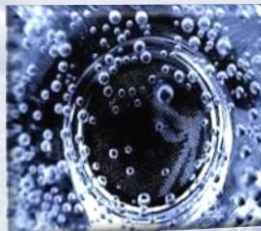
Glass Bottles

Quick changeover times: universal centring bells, quick change air return pipes and bottle guides.

“UC” version: laminar flow of sterile air and contamination control of the filling environment guarantee the hygiene of the product.

External cycle valve actuators for low wear and high precision

Modular design of the filling head: the most comprehensive valve available includes double pre-evacuation, filling, level correction, snift recovery.





Evolution is FITISO/EP electro-pneumatic filling valve for flat and carbonated beverages.

Separated circuit for bottle air return (when filling still products).

Automatic height adjustment for venting tube (CSD).



Canning Line

Ideal conditions for filling Carbonated Soft Drinks (without foam creating) at high speeds and at reasonable temperatures for packaging are developed by the following features:

Small dimension Central product tank

Air return collector separate circuit

Continuous pressure filling with isobaric system



GRAVITY FILLER



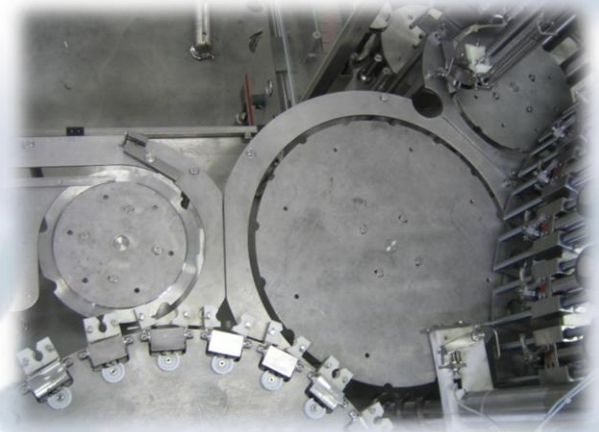
Quick changeover times: universal centring bells, adjustable air return pipes and bottle guides.

Very simple structure of the filling head: only one moving part with a single silicon seal. «UC» version: laminar flow of sterile air and contamination control of the filling environment guarantee the hygiene of the product.

Low vacuum version: automatic fill level correction ensures high level precision and low product loss.

Closed loop CIP cycle with dummy bottles following product flow or in counter current flow.

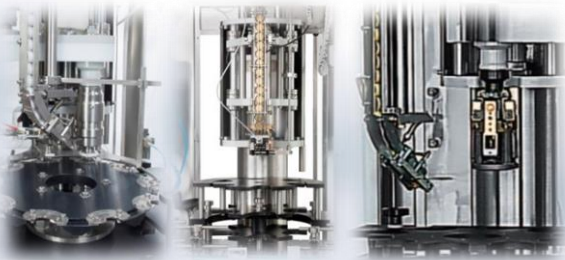
Versatile filling head: the most comprehensive valve available includes level correction and adjustable air return pipe.



CONTAINER CLOSING

Single head capping system

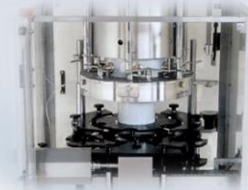
Low production automatic capping machines are suitable for small to medium productions. Flexibility, innovation, and technology for machines characterized by a value for money at the top of the market. All capping are available in free-standing version or built in the monoblocks.



Rotary capping system

The rotary series capping machines are suitable for any kind of caps. The machines can be completely mechanical or with electronic control with a wide range of capping heads types. Machines are available in different sizes for medium to high production speeds.

Rotary corking machine suitable to apply natural **straight or mushroom** corks on sparkling glass bottles.



Rotary capping machine with **crowning heads** with cone for permanent deformation suitable to apply crown corks, twist-crown or ring-pull on glass bottles.

Rotary capping machine suitable for application of aluminium screw **R.O., R.O.P.P.**



Seamer machine

Seamers are suitable to seam a wide range of round containers filled with soft drinks, beer and carbonated soft drinks. Under cover gassing systems are available on request. The seamers can handle open top, easy open and easy peel lids. From 10 to 1200 c.p.m. according to the product and container size.



PROCESS TECHNOLOGY

Carbonator unit: deaeration and carbonation.

Mixer unit: deaeration, carbonation and blending.

Dissolving unit: sugar stocking and dissolution.

Pasteuriser unit : product flash-pasteuriser.

Cip unit: cleaning in place.

Treat unit: water treatment.



Carbonator and mixer unit



Single-stage or double-stage deaeration module.

Dynamic carbonation module with Venturi pipe with pre-stabilisation and carbonation pressure adjustment with overpressure and vent valve.

Evolution batch blending module.

Magnetic flow-meters on water line with “feed forward” Brix adjustment.

Brix analyser and magnetic flow-meter on syrup line with modulating valve at product inlet.

Sugar dissolving unit



Continuous sugar dissolving unit. Continuous monitoring of sugar syrup Brix. Double product filtration system at product outlet

Preparation room



Preparation room for soft drinks, fruit juices, energy drinks.

C.I.P. unit



Fully automated sterilizing solution production unit. Automatic concentration recovery system with dosing pumps. Compact skid-mounted design for simple and fast installation and relocation. Modular structure upgradeable for new cleaning cycles.

Water treatment unit



Modular water treatment system. Active carbon or reversed osmosis filtration.

Labelling machine

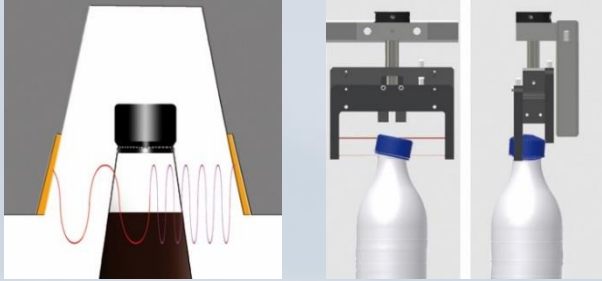
Wet Glue labelling



Roll Feed machine



FINAL PRODUCT QUALITY CONTROLS



THE SYSTEM

Ideal for detecting the fill level of the containers in defence of the brand. The control allow to prevent legal disputes due the distribution of under filled products.

The technology used is designed for the measurement of the product volume in the controlled area.

The system allows the detection of the fill level and the management of the rejection of under-filled or overfilled containers.

FEATURES

- Infrared technology
- Machine vision technology
- Management of rejection signals from external systems
- Independent structure for eliminating noise and vibration and ensuring maximum accuracy and minimum maintenance
- Designed to be integrated with additional inspections (They can be installed after the Monoblock)
- Cap presence
- High/cocked cap presence
- Cap color
- Foam presence (600 series version)
- Monitoring

IMPROVE PRODUCTIVITY

- Reduction of the number of rejects in the event of a filler malfunctioning.
- The system includes consecutive reject alarms and can monitor the performance of individual fill valves.
- Optimization of maintenance interventions on the filler (when integrated with the monitoring system)

IMPROVE QUALITY

- Eliminate customer complaints related to over filled or underfilled containers
- Ensure product quality and compliance with the minimum fill content,



THE SYSTEM

Ideal to ensure the presence of wraparound or sleeve labels, opaque or partially transparent, applied on any type of container.

The configuration of the label presence system is defined according to the type of container and label applied.

FEATURES

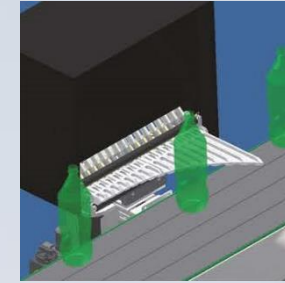
- Optical sensors technology
- The control of semi-transparent labels is based on advanced Smart-Sensor
- No change to the existing line for installation
- Can be remoted and integrated in the interface of other controls
- Can be integrated within the labeler in the case of partial labels

IMPROVE PRODUCTIVITY

- Reduction of the number of rejects in case of malfunctioning of the labeler through the control on consecutive rejects

IMPROVE QUALITY

- Eliminate customer complaints related to label absence
- Ensure the compliance with the regulations concerning the presence of the label
- Ensure product quality



THE SYSTEM

Ideal to ensure the rejection or the deviation towards specific channels of non-compliant products, destined to analysis laboratory or particular working cycles.

The ejection or deviation systems are based on different technologies and use different methods of intervention.

The ejection/deviation system is chosen according to the type of line and product, to ensure maximum effectiveness and precision of intervention.

FEATURES

- The ejection/deviation systems are also available with independent control unit, for the management of the rejection signal coming from from filling or labelling machines for defects related to the process:
- Prepared for the monitoring system to deviate sampling
- Devices with 8, 10, 16 fingers are available depending on the movement to be performed and the line speed

IMPROVE PRODUCTIVITY

- Reduction of the number of line downtime to remove non-compliant products

IMPROVE QUALITY

- Eliminate customer complaints related to non-compliant products
- Ensure rejection of non-compliant products
- Ensure product quality

PACKAGING

Depaletizer



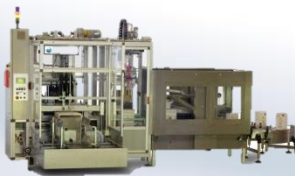
Carton Erector



Pick and Place



Case Packer Block



Shrink wrapping machine



Closing



Cartoning machine wrap around



Palletizer



CONVEYOR SYSTEM



Neck Handling conveyor

A new design concept for three different levels of contamination control:

Modular construction with up-grade capability.

Low friction on bottle guides: very low wearing of plastic bottle guides.

No bottle neck design limitations: tapered neck bottle capability.

Easy to clean: access doors (1 per metre); automatic cleaning system for air duct available as an option.



Conveyor for Bottles

Very sturdy stainless steel structure.

Combiners, dividers, special units available for complex line layouts.



Conveyor for pack

Components designed by FITECO.

Very sturdy stainless steel structure.

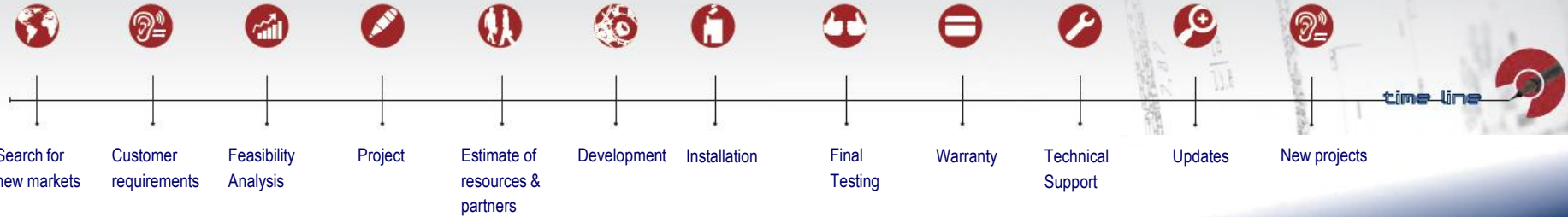
Combiners, dividers, special units available for complex line layouts.



Fiteco to 360°



“ Your trustworthy partner
to satisfy your ambitions ”



FITECO With over twenty years of experience in the field of bottling, automation and engineering of its employees, can guarantee a 360° support starting from the analysis of project feasibility and costs, focusing on customer requirements, through the development, the selection of the most suitable partners, to installation and testing.

The FITECO mission is to provide a high standard of engineering in food, beverage and packaging of complete plants, researching the best market solutions to satisfy customer's needs, and thanks to its versatile, dynamic and avant-garde corporate structure, can provide

filling technology



Fite.co srl | Via Razzaboni, 130/G | 41122 Modena Italy
T. +39 059 450282 | F. +39 059 454970 | info@fiteco.it

www.fiteco.it



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