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- Excuse us for not being future report if some changes are made to the technical parameter and size in the whole products of our company

PROFESSIONAL BEVERAGE FILLING LINE MANUFACTURER IN CHINA



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About Us

Zhangjiagang King Machine Co., Ltd. and its factory Zhangjiagang King Machine Manufacturing Co., Ltd. are located in Zhangjiagang city closed Shanghai airport. The factory is professional manufacture for beverage packing machinery.

We have professional operators and technicians with advanced mechanical processing equipment and complete quality control, King Machine is capable of providing complete and precise parts processing and entire machine manufacturing service, we will create value for worldwide customers. For our quality control, King Machine implements a comprehensive quality management system, depending on the product quality as the life enterprise, till now have passed ISO 9001:2015 certification, the company strictly according to the system and the standards and requirements, so that the operation of products and services can meet customer requirements, and obtains the customer satisfaction and recognition.

Nearly 10 years, King Machine has provided bottling & packing equipment of liquid solutions to companies all over the world, with over 100 different machines available for water treatment, water, juice carbonated drink, oil and other liquid bottling line and labeling and packing machinery.

The priority principle of King Machine is to make the customer success during the high competition in the global market nowadays. Customers' successes and positive reputation will bring more potential customers for us. King Machine is ready to use our full abroad experiences to build up the win-win cooperation with customers worldwide.

King Machine welcome your visiting!

Commit To Professional Machine Manufacture And Services





Brand strength

King Machine integrates five process steps - preform feeding, blowing, labelling, filling and cap feeding - into a single system, utilising integrated equipment intelligence to provide continuous production optimisation and performance enhancement.

King Machine offers lines for the beverage industry and food producers: process technology, filling technology, packaging machines, we offer one-stop service.

King Machine will provide the customized beverage production line proposals for customers including bottle design, label

design, etc, and the best proposal for beverage preparation, packaging system and also advertisement proposals, to help customers start the business and get the market easily.

With around 50 complete beverage production lines exported to different countries all over the world, King Machine is always devoting ourselves to the development of beverage filling and packaging industry all over the world.



**THE WORLD-ORIENTED
KING MACHINE**

Excellent History & Realize Dreams

After sales service

Your equipments deserves the best assistance and King Machind can meet any kind of your requirement.



Professional technical personnels

Service and Spare Parts departments are rapid and efficient as we own professional technical personnels.



International universal parts

90% electrical components using international universal parts, to facilitate customers' maintenance.



After-sales service and maintenance

Our salesmen and engineers will pay annual visits to our customers for regular checking and offering maintenance suggestions, to make their beverage lines keep running perfectly.



Quality management during production

Processing components and part with superior manufacturing equipments and testing devices, and in accordance with ISO9001:2000, King Machine carries out strict quality management during production.



Warranty time

18 months as warranty time.



Installation engineers

Installation engineers have rich debugging experience overseas and can communicate fluently in English.

Some customer cases





Today's fast evolving beverage market requires high performance and versatile filling solutions. In this scenario, King Machine is a reliable partner with a sound expertise and a wide range of rinsing, filling and capping monoblocks that guarantee the highest quality standards.

At the design stage, great attention was given to choosing the best components available, to extreme sanitizability and reduction of running costs, in terms of both consumption and normal operations (quick size changes, easy maintenance, etc.).

A complete and versatile range to meet the most varied requirements in terms of both productivity (monoblocks with up to 180 valves) and products to process: still and carbonated water, soft drinks, milk and dairy products, beer, sport and energy drinks, tea and juice.

	水/Water	果汁/Juice	含气/CSD	啤酒/Beer	酒/Wine	调味品/Condimen	油/Oil	日化/Daily chemicals
半电子灌装阀 Semi electronic filler			√	√				
机械重力灌装阀 Mechanical gravity filler	√	√			√			
机械等压灌装阀 Mechanical isobaric level filler			√	√				
流量计灌装阀 Flowmeter filler	√	√	√		√			
负压抽真空灌装阀 Vacuum filler	√	√			√	√		
称重式灌装阀 Weighing filler	√	√			√	√	√	
活塞式灌装阀 Piston filler								√

Range

Filling monoblocks

The range includes various filling technologies:

- mechanical gravity filler.
- the new electronic filler modular range.
- electronic volumetric gravity filler for large containers.
- mechanical isobaric level filler.



A careful study of plant engineering, the ergonomic design, a complete and simple operator interface and a fully automatic configuration of work process flows make these solutions easy to use and manage.

The monoblock is completed with the addition of mechanical and electronic rinsers, equipped with various types of treatment according to the different plant and equipment choices, and with cappers for plastic, aluminum and twist-off caps and other types of cap.



The structure of the entirely stainless steel basement frame is fully modular for the whole range and was designed with great care to achieve the highest levels of sanitizability of the structural surfaces. The upper level is double sloping for complete draining of possible residues of product, water, fragments, bottles, caps, etc.



Gravity filling monoblock

Output

Fillers with from 12 to 100 valves
from 3,000 to 50,000 b/hour on 0.5 litres with still water.
from 2,000 to 36,000 b/hour on 0.5 litres with fruit juice.

Main features

- Central tank, with product feeding from the bottom of the rotating manifold.
- Entirely stainless steel (grade 304) draining base.
- Reliable, simple and easily sanitized valve.
- Reduced changeover down-times.
- "No bottle no fill", no electronics on the filling carousel.
- PET bottle transfer - neck-handling - with no need for monoblock height adjustment.

Plus

- Centralized level adjustment, with only one intervention point.
- Universal product deflection without deflector (swirl device).
- No dynamic gaskets in contact with the product: the shutter is sealed by a simple membrane, protecting the movement from contamination.
- Simple to operate.
- Evacuation to the outside of air returning from the bottles to prevent possible contamination.
- Automatically engaged dummy bottles as option.

A mechanical gravity filling machine, for PET bottles, designed for cold and hot filling of non-carbonated products.

The machine is available in two configurations:

- cold filled non-carbonated water and clear juices.
- HOT FILL (up to 95 °C)

and more generally for all non-carbonated beverages that require filling with recirculation.

This is a modular project with the same features and advantages for both configurations, with the only difference between the two configurations is a simple hot-fill kit, including a pneumatic valve within the filling valves for product recirculation, a rotating manifold for product recirculation, and an external tank for recovery of the recycled product and pumping back to the pasteurizer.

Products that can be processed

- Mineral water
- Juice
- Tea
- Sport drinks
- Functional beverages



Stillfill S EVO

Non-carbonated
mineral water

Clear
juice

Tea

Juice with
fibre or pulp

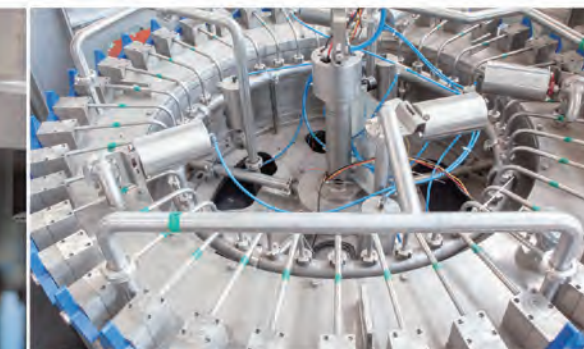
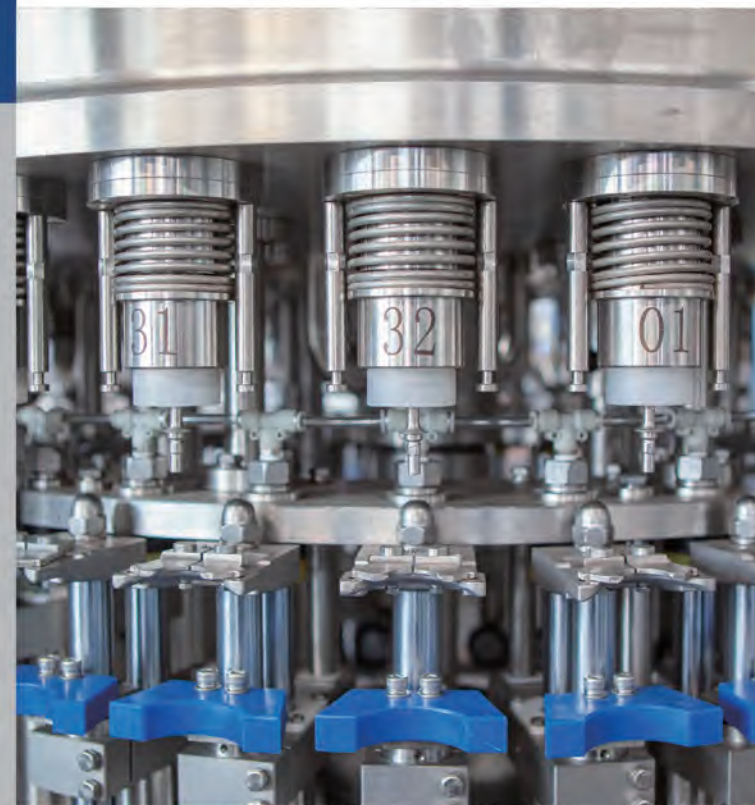
Isotonic and
Sport drinks

Functional
beverages

Stillfill HR EVO

Swirl

Sensitive products must be protected from possible contaminations. To create the suitable environment for processing these products, the filling valve must be extremely simple and sanitizable and the monoblock has to be configured either with microbiologic isolator or laminar flow cabinets ISO 7, and with specific sterilization treatments on containers and caps.



Hygiene

No dynamic gaskets in contact with the product. Small number of static gaskets.

No wells or dead areas inside in order to prevent possible stagnation of product and increase efficiency of washing cycles.

The fixed valve with bottle lifting jack allows the use of the microbiologic isolator (ISO 7) to protect the filling valve area.

Sanitation cycle with the use of dummy bottles.

Fitting and removal of these takes place in an extremely simple and functional way by means of a special bayonet connection to avoid direct contact between operator and valve, as an option, it is now available the automatic engagement of the dummy bottles. Circuit preset for high temperature CIP.

Filling valve

Extremely fast, simple and reliable mechanical valve., featuring "no bottle no fill" without any electronic.

In the HR variant the valve allows filling with products containing large pieces of pulp and fibre. Possibility of filling "to brim".

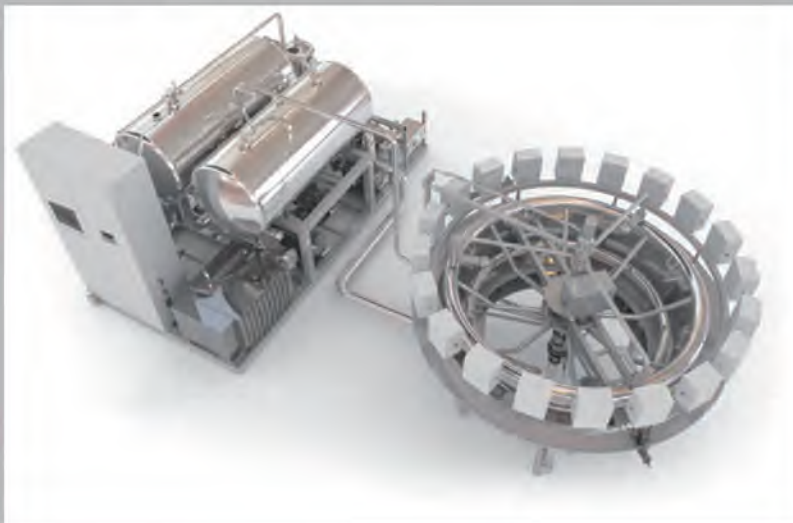
The filling process has been designed to maintain the temperature of the whole circuit (valves, tanks, pipes) even in the event of long stops by means of product recirculation both





A new, extremely innovative and flexible platform, which takes the standard King Machine technologies to the highest level currently available on the market. By taking advantage of the modular nature of all the elements of the platform, and choosing the most suitable filling valve, it is possible to create best solutions for a wide range of bottling needs. In particular, the possibility of being able to fill several products on the same production line was one of our main aims.

At the same time, we developed new electronic volumetric filling valves, created to be perfectly integrated and interchangeable as part of this new platform.



Range of electronic, volumetric filling monoblocks

Products that can be processed

- Carbonated mineral water and CSDs.
- Still water.
- Clear and pulpy juices (also with big dimension pulps).
- Sensitive products (fresh or micro-filtered milk, drinking yoghurt etc.).
- Alcoholic beverages.

Main features

- Valve with magnetic flow meter for product dosing in each bottle.
- Entirely stainless steel (grade 304) draining base.
- No vent tube.
- Reduced changeover down-times.
- Simple to operate and great flexibility with selection of the various products/-formats directly from the operator panel.
- PET bottle transfer - neck-handling - with no need for monoblock height adjustment.
- User friendly touch screen HMI, with menu-based interface.

Plus

- Product deflection without deflector (swirl device) for version with contact between bottle and valve.
- Accurate volumetric dosing (no change-over).
- Filling speed adjustment to handle foaming products.
- Automatically engaged dummy bottles. Bottle shifting into a separate collector.
- The air in the bottle does not come into contact with the product feeding circuit.
- All parts in contact with the product are made of AISI 316L stainless steel (opt.).
- Quick changeover for bottles and necks with different diameters.

Hygiene

The sanitation phase is very simple and is fully automatic and controlled by the filler supervision: the machine prepares itself for the electro-pneumatic control of all the on-off valves. The sanitation cycle is carried out in such a way that all the product path is completely cleaned both in equicurrent and countercurrent.



Non-carbonated
mineral water



Carbonated
mineral water



Carbonated
beverages



Clear
juice



Juice with
fibre or pulp



Isotonic and
sport drinks



Tea



Hot filled
products



Milk and
dairy products



Beer



Mechanical level filler for carbonated products in PET bottles, was designed adopting advanced technologies. It has an innovative design and is equipped with special features for both filling and moving the bottles, which guarantee great advantages in terms of performance and operating flexibility. The valve is also able to fill non-carbonated products.

Products that can be processed

- Carbonated mineral water and CSDs.
- Still water.
- Beer.

Output

Fillers with from 12 to 100 valves from 2,000 to 30,000 b/hour on 0.5 litres with CSD (5°C).

Isobaric filling monoblock

Main features

- Central tank.
- Entirely stainless steel (grade 304) draining base
- Valve with height adjustable moving filling tube to define the level in the bottle.
- Reliable, simple and easily sanitized valve.
- Reduced change over down-times.
- PET bottle transfer-neck-handing-with no need for monoblock height adjustment.
- User friendly touch screen HMI, with menubased interface.

Plus

- Product deflection without deflector (swirl device).
- A single filling tube for all the formats: with centralized level adjustment, with only one intervention point.
- Automatically engaged dummy bottles.
- Manifoldded decompression carried out with the filling tube raised.
- Quick changeover for packages with different diameters.



Non-carbonated mineral water



Carbonated mineral water



Carbonated beverages



Isotonic and Sport drinks

Swirl

For a long time, we have been making an innovative "internal deflection" system standard on our PET fillers so avoiding the deflector on the filling tube, and therefore there is no need for adaptation of the filling tube to the inside of the bottle neck during a format change.

A homogeneous film of product is deflected inside the container without turbulence or foam regardless of the shape, design, size or weight of the bottle.



Semi electronic filling valve
Capacity:15,000bottles/hour for 500ml(32 heads)



Mechanical filling valve
Capacity:10,000bottles/hour for 500ml(32 heads)



Shot tube high accuracy pneumatic electro-filling valve, or mechanical filling valve with double pre-evacuation, Adopt CO₂ or nitrogen as counter pressure gas, no bottle no pre-evacuation & no fill.

Products that can be processed

- Sparkling water
- CSD
- Soda water
- Beer

Output

Fillers with from 12 to 80 valves
from 1,000 to 18,000 b/hour, from 200 ml up to 1 L

Beer Filling monoblock

Main features

- Streamline welded filler platform with sanitary bedplate; Burst bottles flusher, Filling bowl / control mechanism / crowner have auto elevating features.
- Suspension type main gear drive with VSD control; sanitary bottle guiders, integrated bottle star wheels & open type bottle guiding plates, Centering devices with pre-centering by means of lifting guide poles with rollers, Side hanging bottle lifting cylinders.
- Interior guiding sleeves of crowning heads adopt imported lubrication free material guiding sleeve;
- Crowning pressure compensation devices on bottle lifting pads. Washable crowning heads reducing the risk of microbial pollution. With optional feature to use normal crown cap & ring-pull cap in one crowner.
- Equipped with imported high-pressure bubbler, bubbling with 85°C hot sterilized water, and bubbling pressure is sync control with filler speed. Nashi brand vacuum pump with S.S water circulation tank features water temperature circulation controlling to guarantee vacuum degrees -0.085Mpa
- Circulation CIP of filler with dummy cups, the channels are cleaned in sequence as per programs by means of open type valves / pipings station.



Beer



CSD



Soda water



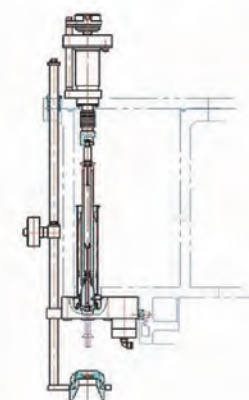
Sparkling water

Filling, burst bottles flushing, open&close of bowl gas vent tube, high-pressure bubbling, caps stirring, capping blow & feeding, display of cap lack, and machine lubrication, etc are well auto-controlled via PLC & displayed on HMI.

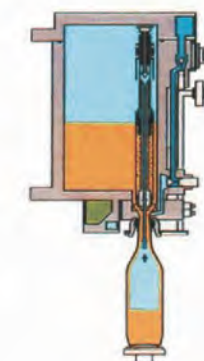


The machine speed is regulated as per bottle quantity signals from infeed / discharge conveyors, equipped with bottle infeed stopper, no bottle no filling & no capping, filling speed display & counter of filled bottles, etc.

Pneumatic
Electro-filling Valve



Mechanical
Filling Valve





Electronic weight filler

Main features

- Central tank.
- Entirely stainless steel (grade 304) draining frame.
- Reduced changeover down-times.
- Simple to operate and great flexibility with selection of the various products/formats directly from the operator panel.
- PET bottle transfer neck-handling with no need for monoblock height adjustment.
- Modular element guards.
- User friendly touch screen HMI, with menu-based interface.
- Very innovative and performing software to manage product dosing.
- Ultra clean configuration available as option.
- Pressurized tank and nitrogen flushing are available as option.
- Complete product recovery tray at end of production and product change under the valves.

Plus

- Extremely accurate and precise product dosing, with automatic changeover.
- Double filling speed to handle foaming products and for a fine dosing at the end of filling.
- Automatically engaged dummy bottles, available on request.
- All parts in contact with the product are made of AISI 316L stainless steel (opt.).
- Quick changeover for bottles and necks with different diameters.

It is an electronic weight filler designed for high added value products in PET bottles. This version is equipped with an extremely accurate, precise, clean and fast filling valve with no contact between valve and bottle. Weight filling technology is the most reliable and precise system for filling bottles with high-value products such as edible oil, milk and derivatives, premium clear juices, home and personal care products.

Products that can be processed

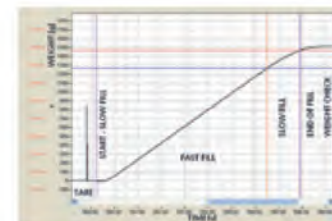
- Edible oil.
- Liquid food, dressing and sauces.
- Detergents and personal care.

Output

Fillers with from 12 to 96 valves
from 3,000 to 50,000 b/hour on 0.2-1.5
litres with edible oil.



Edible oil

Detergents
Detergents
and sauces

Filling process

Tare: Membrane valve closed.
Start - Slow fill: slow valve open.
Fast fill: fast valve open.
Slow fill: slow valve open.
End of fill. Load cell send the close signal to the membrane valve.
Final weight check by load cell.



Filling valve

Extremely simple, clean and fast "no contact". The valve nozzle, without any vent tube, features a special design to create high flow without foam and dripping; perfectly suitable for no contact valve.

This solution guarantees high flow performance and an easy handling of foaming products.

Filling system with load cell for an extremely accurate, precise product dosing in each bottle.



Hygiene

The sanitation phase is very simple and is fully automatic and controlled by the filler supervision: the machine prepares itself for the electro-pneumatic control of all the on-off valves. The sanitation cycle is carried out in such a way that all the product path is completely cleaned both in equicurrent and countercurrent.

Automatic dummy bottles available on request.
Circuit preset for CIP and SIP up to 100°.



It is an piston filler designed for high added value products in Plastic bottles. This version is equipped with an extremely accurate, precise, clean and fast filling valve. Piston filling technology is the most reliable and precise system for filling bottles with high-value products such as edible oil, detergent, shampoo, dishwasher, liquid soap, bleach, clorox, toilet cleaner, home and personal care products.

Daily chemicals product:

Suitable :detergent, shampoo, dishwasher, liquid soap, bleach, clorox, toilet cleaner etc
Bottle Material : PE PP Bottle
Bottle Type : Round / Square / Unique
Cap : Screw cap Label : Sticker Label

Output

Fillers with from 6 to 24 valves
from 1,000 to 4,500 b/hour on 1 litres
with shampoo.

Piston Filling Monoblock

Main features

- High degree of automation, easy operation, stable operation, can effectively save corporate costs and improve production efficiency.
- Each single machine can complete its work independently. It has independent operating system and electrical components such as numerical control display to control and adjust various parameters and display settings. Can help companies achieve standardized production
- The individual machines are linked and separated quickly, and the adjustment is fast and simple, so that each process of production can be coordinated.
- Each single machine can adapt to the packaging of various specifications of bottles, with few adjustment parts.
- This packaging production line adopts international new process design and meets GMP standards.
- The production line runs smoothly, each function is easy to combine, and the maintenance is convenient. Various production combinations can be performed according to the user's respective product process requirements.



Corrosive Liquid

Detergent

Hand Washing Liquid

Iodophor

Oil and Fat Products

Lubricating Oil

Plus

- Widely used in filling machinery, especially suitable for filling viscous material.
- Fast filling speed, precision and stability
- Delicate and small, easy for arrangement for pipe arrangement
- Special seal design at the bottom of the filling nozzle, filling without dripping.
- Chamfering structure on the bottom of filling head, with orientation effect and submersible filling.

Filling process

It is an advanced filling equipment for Anticorrosive liquid products based on the characteristics of the Viscous liquid with thick and slightly corrosive characteristics. Each filling valve is controlled by servo motor, realizing segmented high-and low-speed control; vacuum resorption devices without leakage, applicability for both crowning and capping, mechanical instant sealing or servocontrolled sealing.



Special filling machine - piston cylinder.

As shown in the picture, a new cylinder liner in the piston bottom will be much more flexible than the unable disassembled and washed traditional cylinder. You can use touch screen to separate piston and cylinder liner, in order to easier cleaning for residual materials. easy choose different mode for different material.

Hygiene

The sanitation phase is very simple and is fully automatic and controlled by the filler supervision: the machine prepares itself for the electro-pneumatic control of all the on-off valves. The sanitation cycle is carried out in such a way that all the product path is completely cleaned both in equicurrent and countercurrent. Automatic dummy bottles available on request. Circuit preset for CIP and SIP up to 100°.





Cans Filling Monoblock



Compact can filler for the Medium-capacity range

Good To Know

We also make our innovative, state-of-the-art technology available to small and medium-sized breweries. This is demonstrated by our King Machine CAN Compact can filler which gives operators established high-tech in a particularly compact space. The filler, valve manifold, seamer, control cabinet and paneling form a closed unit.

The King Machine CAN Compact fills between 2,000 and 36,000 cans per hour and is thus especially suitable for craft brewers.

Convincing

- Compact design for the low-capacity range
- Flexible format changing thanks to product changeovers without flavor carryover
- Up-to-the-minute technology ensures extremely low oxygen pickup

Sustainable

- 30% less CO₂ used than on conventional systems
- Short cleaning times thanks to an extremely hygienic design without water lubrication
- High availability through a simple commissioning and flexible production process



Carbonated beverage

Lactobacillus beverage

Soda water

Soft drink

Juice

Beer

Energy drink

Coffee

Well Thought Out

With its high-quality technology on a small scale our filler for 0.2- to 1.0-liter cans is convincing. Thanks to our patented purging process this compact system has an extremely low CO₂ consumption. The computer-controlled, volumetric filling system provides maximum dimensional accuracy: it ensures uniform filling levels and also that headspaces of exactly the same size are created in the cans. The hygienic design of the King Machine CAN Compact is also innovative, this safeguarded by the gapless bell guide with PTFE expansion joints (Teflon) and bells which are lifted and positioned fully electropneumatically to seal the cans. The beverage to be canned is supplied to the filling stations by a rotary distributor, thus saving space in the filler carousel. This makes the machine especially easy to access for maintenance and enhances hygiene.

The machine enables the filling of mixed alcoholic beverages, beer and csd.



KING MACHINE Can Filler

The method of operation of the new filling valve

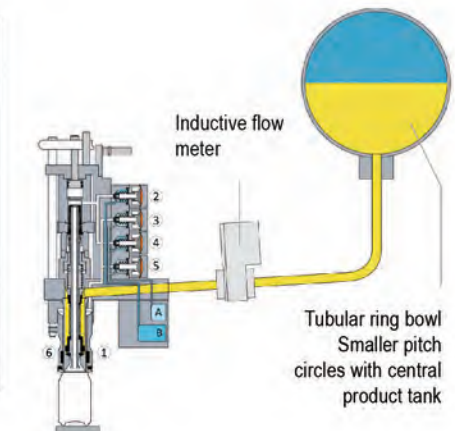
The can is fed into the filler and positioned underneath the filling valve. The valve is pneumatically lowered onto the can for pressing-on. Thanks to a differential pressure chamber, the cans are also centred and pressed onto the valve with extreme care. The filling process begins immediately after flushing. An inductive flow meter checks the quality of inflowing liquid. The valve closes once the specified filling volume has been reached.

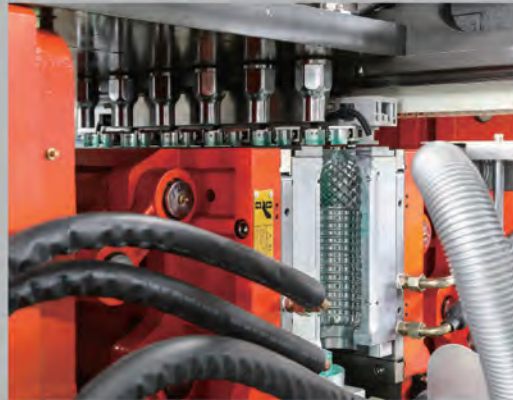
Optional

Cleaning in a closed system using automatically positioned CIP cups

Filling valve for filling beer

1. Product stem
 2. Flushing valve
 3. Snifting valve, rinsing
 4. Pressurisation and return gas valve
 5. Valve for snifting can headroom
 6. Centring bell
- A Snifting channel
B Pressurisation channel





Full Electrical Servo Bottle Blowing Machine

Output

Blowers with from 2 to 12 cavities from 4,000 to 24,000 b/hour on 0.5 litres with water bottles.

The main core technology

- Servo motor driven the mold clamping system and triggering off a bottom mold linkage as well (Synchronous belt driven the both size of movable mould plates.)
- Servo motor driven stretching system (Down stretching and blowing), the stretching rods are driven by a servo motor all at once, which ensures the synchronicity of the motion of the rods and makes it easier to do adjustment prior to production. (After interchanging the bottle blow mould, makes it much easier to adjust the height of stretching rods, just need to input the datas on the touch screen, instead of doing the adjustment by manual.)
- Servo motor driven stepping motion for preform rotary heating system (38mm Preform heating pitch, more preforms are uninterruptedly heated within the same distance, which improves the efficiency and energy saving above 50%)
- The preform transfer system with the grippers and variable pitch system are both driven by the servo motors to ensure high speed and accurate preform handling between the two mechanism.

Variable Pitch

Linear full electric PET bottle blow molding machine is a high speed automatic PET blower designed and developed with the most advanced bottle blowing technology at present, the advantages of which can be described as speedy, stable, simple, general purposed and environmental safe. The machine yields abundantly with high efficiency. Equipped with preform auto loading system, the machine works fully automatically with consistent performance and high speed, without any operator's interference during the whole processes. Accordingly, chance of contamination can be reduced manifestly, which assures the quality of products.

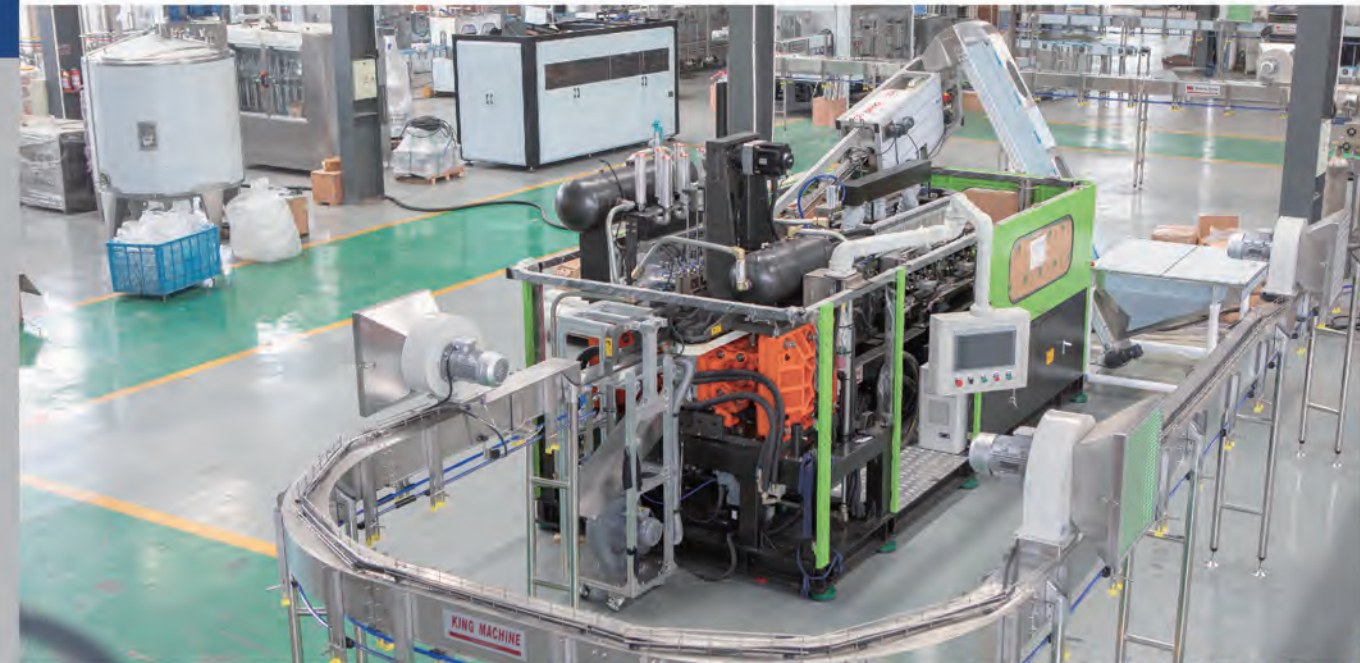
Products that can be processed

It is mainly applicable in blow molding PET containers for water, beverage, juice, etc.s



Technology Development

- Innovation of mold locking system
- Application of the servo PLC system (Motion controller)
- Energy-efficient heating system
- Application of the servo motor
 - The mold movement mechanism
 - The stepping and heating mechanism
 - The perform variable pitch system
 - Preform transfer system with the grippers and bottle out-feed mechanism

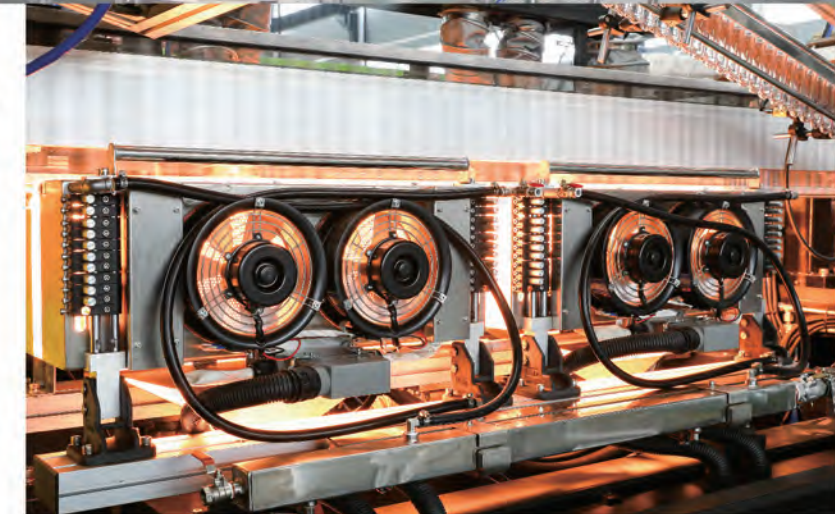


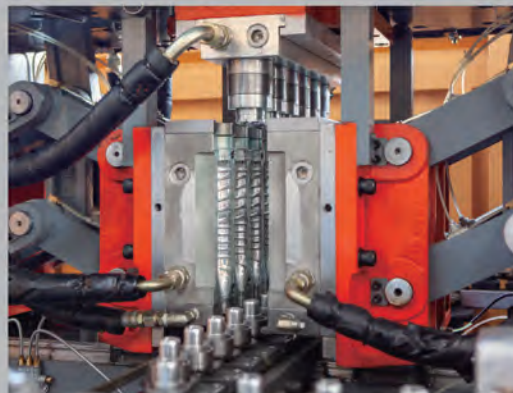
Easy Maintenance

Since the machine is connected to the programmable logic controller (PLC) via particular communicating cables, the user can manage all the actions of the machine through the PLC, which will send warning signals and the problem diagnosis report to the operators when there is something wrong with the machine. Accordingly, the operators can easily find out the causes that lead to the problems through the indications shown and fix them quickly.

Safety

Linear full electric PET bottle blow molding machine is equipped with following mechanic and electric protecting devices in order to assure the safety of operators and durable stable operation of the machine.





Automatic PET Bottle Blowing Machine

Main features

1.1 New Auto Preform Unscrambler System

- Adopts one-way preform-feeding structure and preform-separating by servo motor structure which solve the preform block and abrasion problem.
- There are two photoelectric sensors to control preform-loading motor and preform-separating cylinder that will warn the operator to add the preforms into the hopper when lacks preform instead of stopping the machine.

1.2 New Heating System

- Perfect heating system design decrease power consumption.
- Special oven design helps power saving and easy maintain.
- Each lamp position and temperature can be adjusted.
- Cycle air-cooling system keeps the oven temperature constantly.

1.3 The Application Of Servo System On Main Transmission

The transmission adopts servomotor for positioning that can orientate the preform-heating base quickly, accurately and steadily when the machine starts and running.

King Machine new linear model full electric PET bottle blowing machine, equipped with 4 servo systems, servo preform separating/servo chain driving/servo molding system/servo stretching system, make sure the machine performs perfectly on speed, stability and energy saving.

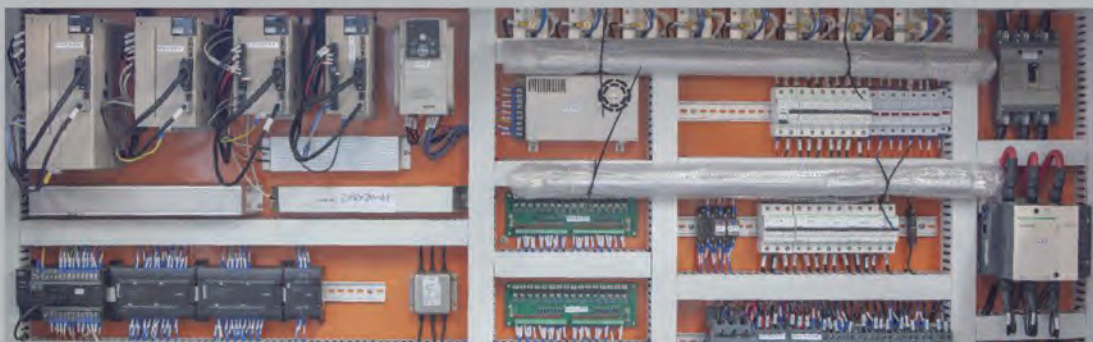
This model has several different series, suitable for different bottle size and different capacity. With KING MACHINE advanced filling and packing machines, you will have your high standard full automatic complete beverage production line.

Products that can be processed

- Pet bottles
- Pet cans

Output

Blowers with from 2 to 12 cavities from 2,000 to 12,000 b/hour on 0.5 litres with water bottles.



1.4 Servo Technology Innovation On Clamping System & Stretching

- Adopts servo motor to drive the two cranks to control the clamping system which can shorten the mold-clamping time and improve productivity, and also solve the swelling mold and big joint line problem with the effect of pressurize plate.
- Servo motor using for stretching to ensure the bottle blowing speed faster and more stable bottle quality.

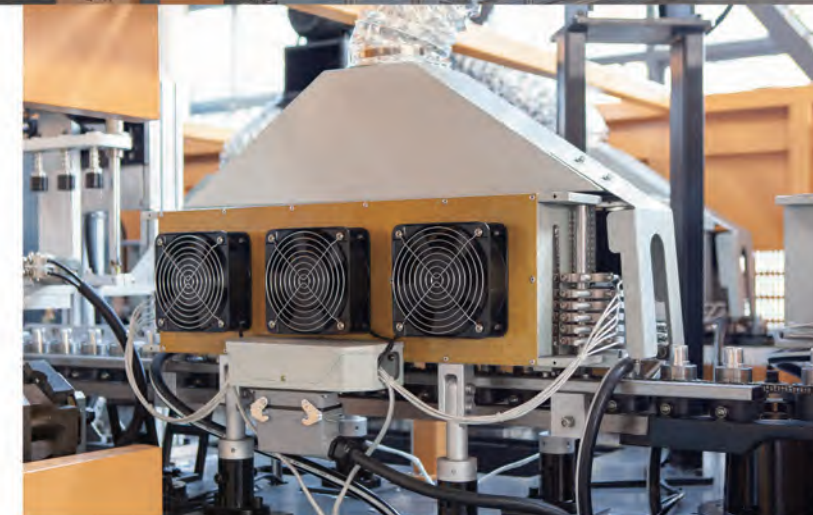


1.5 Easy To Change Bottle Shape

Drawer type mold structure design is easy for mold changing. Within one hour can change a mold on the condition of same bottleneck diameter.

1.6 Intelligent Human-Machine Interface

- Human-machine interface control, easy operate and monitor.
- Live production information supervise, auto record production data everyday
- Failure warning and troubleshooting.





Air Conveying For Empty Pet Bottles

Hygiene

- Air quality control: filtration levels from pre-filtration to absolute filtration (99.99% at 0.5 μm)
- Airtightness control: airtight plenum-to-plenum connecting flange, side or full cowlings, air overpressure tunnels
- Full cleanability: washable design and materials, demountability and accessibility to all conveyor elements

Performance

- Flowing conveying: fans automatically adjust to container characteristics, machine speeds and to conveyor occupation rate thanks to dedicated frequency inverters
- Lubrication for optimum friction coefficient
- Ergonomics: accessibility to wire ways, grooved aluminum profile for installation of peripherals, easy clip-and-slide of neck rails for quick replacement

Your bottle is all the more sensitive and fragile as it is empty, before the filler. Transporting these few grams as carefully and as efficiently as possible up to the filler means ensuring air purity and precisely controlling air flow rate.

Flexibility

- Transport of a great diversity of shapes and sizes of empty PET container, even at high speed
- Easy integration in any existing building or line: wide range of plenums, curves, up and downslopes
- Fast changeover: manual or automatic adjustment of guide and body rails, preset formats accessible through a use-friendly control panel
- Management of complex lines: high speed switch gates for distribution and combining of up to 3 lanes



Container Conveying

Because the output of your line greatly depends on the conveying systems, KingMachine conveyors are designed around a modular mechatronic approach ensuring their reliability and adaptability to production changes. KingMachine conveyors handle a wide range of container shapes and formats in different configurations: PET or glass bottles, metal cans, beverage cartons.

Easy Line Integration

- Simple wiring to existing interfaces thanks to hybrid cabling
- Compliance with most common technical standards, machine specifications and line networks
- Easy integration to automation architecture centralizing line parameters

Product Care

- Flowing conveying preventing pressure on the products and obstructions on the line
- Conveying parameters adapted to the characteristics of the container to convey
- Dry or wet lubrication for a smooth conveying
- Ultrasonic sensor improving line reliability compared to traditional technologies

Flexibility

Fast and easy format changeovers thanks to preset control programs and pre-programmed intuitive operator panel

- Automatic adjustment of guiding system to bottle formats in lanes
- Multi-format mechanical design and functional drive design enabling fast format change with minimum settings

Total Productivity Maintenance (TPM)

- Sturdy design and materials (stainless steel)
- Standardized drives, chains, pneumatics and computer elements for easy maintenance
- Easy parts management and supply: mechanical wear parts available by the biggest manufacturers improving
- Simplification and reduction of automation equipment (control cabinets, wiring, captors, actuators) thanks to decentralized and modular
- mechatronic architecture and hybrid cabling





Labeling Solution

HOT-MELT / ADHESIVE / COLD-GLUE

KingMachine LABELLING offers a complete range of auto-matic labelling machines for glass, plastic and metal containers, for the beverage, food, household /per-sonal care, wines/spirits, chemical, pharmaceutical, and packaging industries.

Automatic rotary labelling machine for the application of pre-cut (cut & stack) complete wraparound labels on either cylindrical or shaped containers made of glass, plastic or metal.



Rotary Hot-Melt labelling machine to apply, with the maximum reliability and precision, wraparound pre-cut paper labels (or plastic labels) on either cylindrical or shaped containers made of glass, plastic or metal.

The container presence photocell positioned near the inlet wheel generates a signal used for starting the labelling process when a container is present.

The spraying device applies Hot-Melt vertical glue dots (or stripes) to the container.

The container picks up the label from the label magazine; then the spreader applies the Hot-Melt glue to the final vertical end of the label, thus ensuring proper application. A smoothing device completes the process.



Main Features

- High output and labelling precision;
- Ergonomics for full access to all machine parts guarantees easy change format and reduces maintenance operation time;
- The system allows for retrofitting of upgrades;
- Innovative labelling station guarantees flexible and quick label change parts and the possibility to handle many type of labels;
- Low TCo (Total Cost of ownership);
- Plug&play technology (easy installation into the line is guaranteed by a compact machine layout).

Efficiency, reliability and accurac

- High efficient labelling process (speed up to 36,000 Bph);
- Continuous production;
- Easy use for the operators of the machine.

Flexibility

Minimal format changeover times and is very efficient thanks to its very accessible structure; procedures are fast and simple, and all adjustments can be done via the HMI (Human Machine Interface).

The machine can be installed in various configurations and with up to two nordson glue pumps, depending on the available space and machine speed. In addition to in-line configuration, the machine can be installed in parallel or other layout configurations.

Sustainability

- Operating system using nordson technology allows label application with an important reduction of glue quantity;
- Highly efficient operation, very short cleaning times and low maintenance cost are the main characteristics of this machine.

Labeling Solution

Sleeve Shrink Labeling Machine

Today, shrink sleeve represents around 20% of labelling production and is one of the fastest growing formats. The increasing use and success of this heat-shrink sleeve label is largely due to its potential to provide far more branding opportunities than conventional labels. Shrink sleeve labels adapt to any surface with no restrictions on container shape. At the same time, it is especially suitable for lightweight containers. The label sleeve can function as an effective seal and can also serve as a light barrier to protect the liquid. With heat shrinking, no traces of glue are left on the bottle, simplifying the recycling process.

KEY HIGHLIGHTS

- A unique and patented label application
- Efficient and top-quality labelling
- Quick payback
- Flexibility of containers, films and layout

APPLICATIONS

- Plastic bottle
- Glass bottles
- Cans
- Metal bottle



Packaging System

PE Film Packaging

The range has been designed with modular units, with the large majority of structural elements shared between the different models. Common packaging methods on the market are pe film packaging and carton packaging.



Within the Packaging system range, although all products have the same general characteristics, we have identified five main configurations, which are optimized for specific applications:

				
塑料瓶/Plastic Bottles	易拉罐/Cans	玻璃瓶/Glass Bottles	纸盒/Tetra Pak Carton	铝瓶/Aluminum bottles
Packaging of plastic bottles Output Packing combination: 4*6, 3*4, 2*3 from 10-50pcs/min (based on 250ml-2L)	Packaging of Cans Output Packing combination: 4*6, 3*4, 2*3 from 10-50pcs/min (based on 330ml)	Packaging of glass bottles Output Packing combination: 4*6, 3*4, 2*3 from 10-50pcs/min (based on 500ml-750ml)	Packaging of Tetra Pak Carton Output Packing combination: 4*6, 3*4, 2*3 from 10-50pcs/min (based on 250ml)	Packaging of Aluminum bottles Output Packing combination: 4*6, 3*4, 2*3 from 10-50pcs/min (based on 250ml-2L)



Packaging System

Carton Packaging

No dynamic gaskets in contact with the product. Small number of static gaskets.
No wells or dead areas inside in order to prevent possible stagnation of product and increase efficiency of washing cycles.
The fixed valve with bottle lifting jack allows the use of the microbiologic isolator (ISO 7) to protect the filling valve area.



				
塑料瓶/Plastic Bottles	易拉罐/Cans	玻璃瓶/Glass Bottles	纸盒/Tetra Pak Carton	铝瓶/Aluminum bottles
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The steady pallet palletizer range have infeed from below (in some cases the product can also be fed from the top). According to the product to be handled, the standard central unit can be integrated with various heads and accessory elements:

- PTF: layer transfer by halving platform for packs and cartons (even crates with the same head), clusters and multipacks.
- PTF/V: layer transfer by halving platform for packs and cartons (even crates with the same head), clusters and multipacks, version with double moving platforms for high output lines.
- PM-PG: layer transfer by centralized jaw head (PM) and hook head (PG) for plastic crates.
- PP-PR: layer transfer by pliers-type head (PP) and cap-type head (PR) for full or empty PET and glass bottles.
- PV: with vacuum head for empty loose containers (PET and glass).
- PS: sweep-off head for full glass loose containers.
- PH: with magnetic head for tin containers or jars with metal lids.

Products That Can Be Processed



Conventional Palletising System

Automatic palletizers steady pallet type.

Technical Features

- Product infeed can be orthogonal or in line, often used for high operating speeds.
- The whole range is designed to accept a variable number of product infeeds (from 1 to 4).
- All models can be integrated with the robotized Fastlayer layer preparation device.
- Depending on the customers' production requirements, multi-pallet or multi-layer versions are available.
- Fully automatic system requiring limited operator intervention, operating in complete safety.
- Extremely simple, complete operator control panel. It can be integrated with an advanced control and supervision system.
- Possibility to handle all main pallets on the market trouble-free, with highly customizable solutions (half and quarter pallets, displays, dollies, etc.).

Output

Up to 330 layers/hour.
Up to 420 layers/hour with the double mobile platform solution.



Technical Features

- Depending on the customers' production requirements, multi-layer and multi-pallet versions are available for the depalletizer.
- The depalletized layer is fed onto the line both on chain and air conveyors.
- Fully automatic system requiring limited operator intervention, operating in complete safety.
- Extremely simple, complete operator control panel. Can be integrated with an advanced control and supervision system.

Output

Up to 180 layers/hour.
Up to 230 layers/hour with the DSV.
Up to 320 layers/hour with the DM for crates.



Conventional Depalletising Systems

Automatic depalletizers steady pallet type.

The range of steady pallet depalletizers with product outfeed from the bottom is extremely flexible, and was designed to allow every user to create the most appropriate solution for their own needs. Based on a standard central unit and customizing with different heads and accessory modules, it is possible to handle the widest range of container shapes.

- DS: sweep-off depalletizer with complete layer transfer by independent jaw head and intermediate table for loose containers such as glass, PET bottles and jars.
- DSV: similar to the DS model but with a special head which increases overall productivity.
- DM-DG: layer transfer by centralized jaw-type head (DM) and hook head (DG) for plastic crates, with or without window.
- DH: with magnetic head for tin containers or jars with metal lids.
- DB: with inflatable pipe head for empty glass bottles with special shapes or partitions.

Products That Can Be Processed



The Right Equipment For Every Brewery



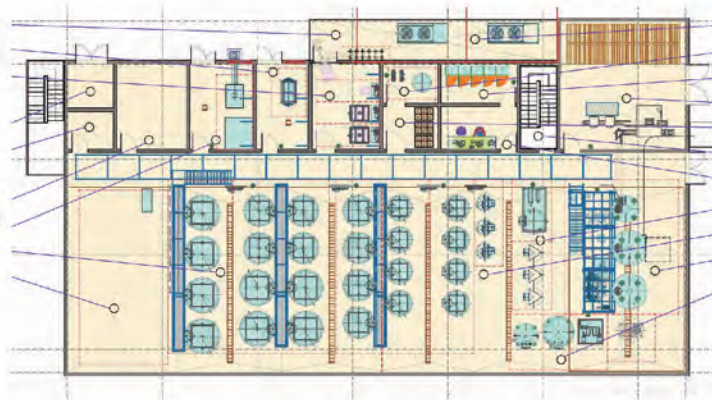
Brewing block for manual operation (5 hl, 10 hl and 17 hl)



Skid solution for automatic operation (25 hl – 40 hl)

Standard layout for a brewery with a brew size of 25 hectolitres

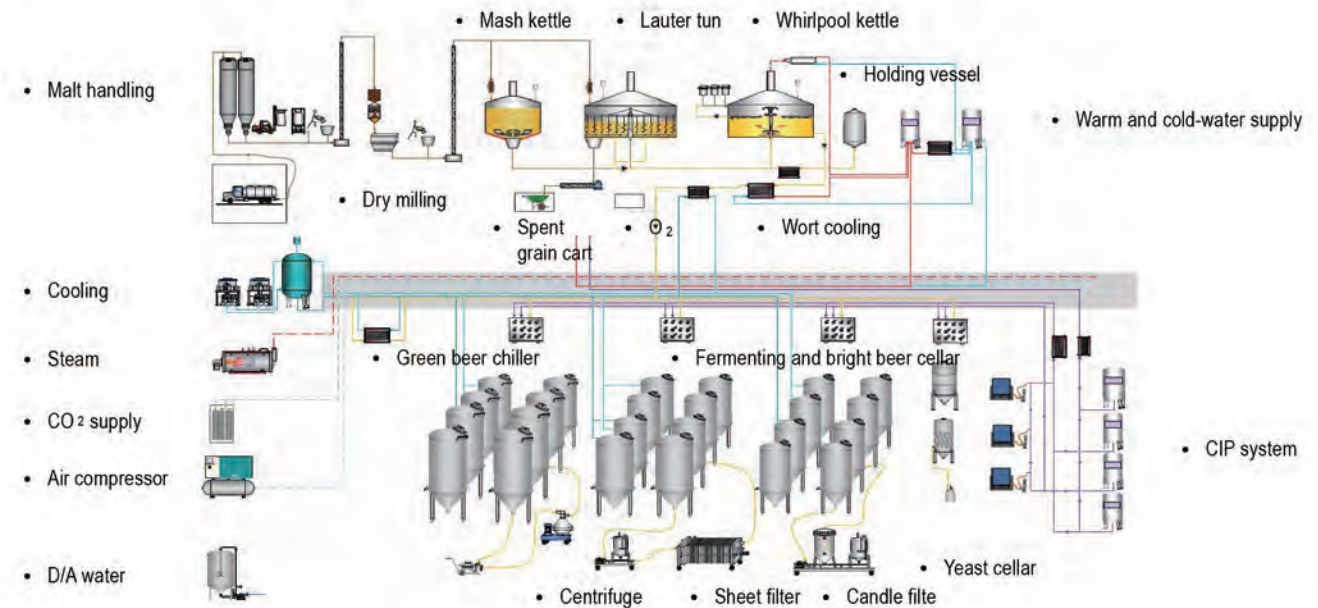
- CO₂ supply
- Air compressor
- CIP concentrate dosing
- Transformer*
- Medium and low voltage*
- Workshop
- Steam generator
- Fermenting cellar
- Area for filter, centrifuge, D/A water system, beerchiller etc.



- Cooling system
- Glycol water tank
- MCC room
- Malt handling
- Hops storage
- Stairwell
- Control room
- CIP system
- Yeast cellar
- Brewhouse
- Water supply

Floor area of the building: approx. 39.0 x 22.2 m
Building height: approx. 11.5 m (for fermenting tanks with a volume of 150 hl)

Function plan and plant layout



Technology – Brewhouse

Gr 1st Mill With Two Rollers

- Milling capacity 500 kg/h with two malt silos @ 7,000 kg
- Mashing-in output 2,500 kg/h

Mash Tun

- Mash volume 16 – 20 hl, heating rate 1.0 K/min
- Shell heating for the mashing process
- Pillow plate technology for low thermal impact
- Automatic process with manual dosing of additives

Lauter Tun

- Lautering area 3.1 m², false bottom load 161 kg/m²
- Automatic lautering process for first wort and sparging wort with manual dosing of additives and disposal of spent grains

Whirlpool Kettle

- External boiler with 130 kW
- Vapour condenser for hot water generation
- Up to 3 hop dosages @ 6 kg





Water Tank

Silica Sand filter

When the water through the machine, it machine will stop suspend substance through the good quality silica sand. and also protect the following machines and also clean the water this machine can achieve the back washing itself through the manual valve device, and can prolong the life of machine also.

Active carbon filter

This equipment can clear away heterochrosis and off-favor from the water and can remove heavy metal such as mercury, lead, cadmium, zinc iron, manganese and chromium and hydrogenate, sulphide and so on. It also could remove hydride, sulfure and so on macromolecular compound, then make the water aseptis and sans taste. we could use manual working vlave to finish reverse washing.

Sodium ion exchanger

This machine we also called softner, that Soften theory is Exchanging Na^{++} of resin itself instead of $Ca^{++}Mg^{++}$ of water resource with Ion to make water resource soften and become soft water.

Water Treatment Plant

Ultrafiltration system

Purpose:

Ultrafiltration is a membrane aperture size related screening process, driven by the pressure difference on both sides of the membrane, ultrafiltration membrane as the filter medium, under certain pressure, when the raw water flow through the membrane surface, ultrafiltration membrane surface with many tiny hole only water and small molecules through and become through the liquid, and concentrate in the volume is greater than the membrane surface micro aperture that substance is trapped in the liquid side of the membrane, become thick water, so as to realize the unclean raw water purification, separation of purpose.

Design standards

- Control mode -- automatic operation to produce water, shutdown, automatic quick flushing; Manual off-line chemical cleaning.
- Quantity -- 1 group
- Film code number: American GE film, 8 inches
- Number of films -- 4 pcs
- Treated water volume -- 13m³/H



Reverse Osmosis System

Purpose:

The reverse osmosis pure water system USES the advanced Dow low pressure reverse osmosis technology to purify the raw water. Combined with the well-designed filtration and adsorption system, it can effectively remove all kinds of bacteria, residues, heavy metal ions and other harmful substances in water, and can even remove the carcinogenic pathogens such as trichloromethane and fluorine that cannot be removed by conventional means.

Required according to the terminal product water conductivity, the two groups of reverse osmosis system in parallel, series water, must pay attention to the raw water quality, in strict accordance with manual operation, maintenance and maintenance, the system of pure water conductivity can be totally within the national standard of 10 us/cm below, make sure that making direct drinking pure water, in line with the who JianFa (1998) no. 19 file attachments 4 health requirements and the ministry of health of GB5749-85 "drinking water health standards"

Design Standards (accept customization)

- Control mode -- automatic operation to produce water, shutdown, automatic quick flushing; Manual off-line chemical cleaning.
- Quantity -- 1 group
- Membrane model -- DOW 8040
- Number of films -- 9 PCS / group
- Model number of membrane shell -- 8 inches, 3 cores, 3 pieces/group
- Primary reverse osmosis water yield -- 7m³/H

Ozone high efficiency mixing plant

Purpose:

Make ozone and finished water fully mixed, remove bacteria, microorganisms, etc., to ensure the water safety and sanitation.

The suction inlet of the gas-liquid mixing pump can use the negative pressure effect to inhale the gas, so there is no need to use air compressor and atmospheric ejector.

High speed rotating pump impeller to mix the liquid and gas, so no agitator and mixer.

Due to the pressure mixing pump, gas and liquid fully dissolved, dissolution efficiency up to 80~100%.

Therefore, a highly soluble solution can be produced without the need for large pressurized gas tanks or expensive reaction towers.

A gas-liquid mixing pump can be used for gas-liquid suction, mixing, dissolution and directly to the height of the solution sent to the point of use.

Therefore, the use of gas-liquid mixing pump can improve the efficiency of gas-liquid production, simplify the production device, save the site, greatly reduce the initial investment, save operating costs and maintenance costs.





Water Treatment system Reverse Osmosis

The main core technology

Level 1 reverse osmosis

For reverse osmosis membrane element, can withstand the disinfection CIP process, shell for glass fiber reinforced plastic and stainless steel structure, wall and used pipe, both in polishing, passivation, no dead Angle, no dead zones, prevent microbes breeding. Valve table, sealing ring, and all piping, adopt Germany without wire automatic welding equipment, welding level level health and resistance to water hammer design standards set by the FDA, and pure water recovery rate of 80% or more.

The secondary reverse osmosis

After secondary reverse osmosis can further remove the salt dissolved in water, colloid, microorganism, desalination rate can reach 98%.

Products That Can Be Processed

It is mainly applicable in filter Raw water for groundwater and Deep well water etc.

Output

from 1,000 to 60,000 L/hour with pure water.

The Right equipment For Every Beverage Factory

Staying Flexible In Sugar Processing

Sweet, fruity, sour or bitter: the syrup room is the starting point for innovative taste sensations which your product designers repeatedly manage to conjure up. Perfect working conditions for mixing new flavour nuances and developing successful products have many benefits. For they provide the foundations for your products' market success, and this already during the first step in the production process.

At A Glance

- Concept for the preparation of beverage ingredients
- Preparation of powder, liquid or frozen raw ingredients to form the most diverse products
- Production of finished products and finished syrups for further processing
- Can be flexibly extended thanks to modularly arranged units
- The output range can be individually adjusted to suit your line output



Best-precision Mixing And Carbonation

No n-alcoholic refreshment drinks are the hit. This is why more and more flavour combinations appear on the market awaking the consumers' curiosity. A flexible line technology which provides a maximum leeway for the beverage manufacturers is required.

At A Glance

- Mixers and carbonators for the production of different beverage types
- Up to five different sizes with variable outputs (33 to 100 percent) of 15, 30, 45, 60 and 90 m³/h are available.
- Saving space of up to 15 percent thanks to compact design and integrated filler valve manifold
- Highly accurate dosing of syrup and CO₂ for a reduced syrup consumption of up to 0.4 percent





The Right equipment For Every Beverage Factory

The Efficient Product Deaerator

Five reasons for product deaeration:

- 1.Reduced solute oxygen to avoid oxidation
- 2.Minimisation of unwanted flavours (e. g. milk)
- 3.Prevention of problems during filling (especially with hot fill processes) thanks to reduced gasses
- 4.Avoiding pulp and fibres floating up inside the bottle
- 5.Increased shelf time at UHT milk

At A Glance

- Deaeration tanks with patented swirl inlet
- Output: 1 to 60 m³ /h
Recovery and return of flavouring through a Venturi nozzle
- Internal recirculation for a multi-stage deaeration
- Reduced mixing phases for short change-over times and low product losses

Heat Exchanger

Efficient product heating based on heat exchanger systems with heat exchanger surfaces exactly adjusted to suit the characteristics of the product. KingMachine systems gently heat your products, ensuring microbiological safety and, above all, with substantially reduced energy consumption.

At A Glance

- Are suitable for a wide variety of products with different flow characteristics (even for products containing particles/fibres)
- Reduce the thermal impact acting on the product due to low dwell times
- Are available as complete system or individually designed to suit your line
- Field of application in the KingMachine product portfolio
 - Pasteurisation
 - Ultra-high heating
 - Hotfill



Optimal Cleaning For Processing Section And Bottling Systems

The CIP system offers coherent cleaning processes which ensure trouble-free and microbiologically safe operation of a production line. Regardless of whether manual or automatic –the cleaning concept is perfectly tailored to suit the line components to be cleaned or to the number of bottling lines.

At A Glance

- Applications: Cleaning of fillers, flash pasteurisers, mixers, syrup rooms as well as piping systems and tanks
- Feasible manual or fully automatic cleaning control
- Absolutely flexible with regard to size and number of tanks / parallel cleaning lines or dosing of chemicals

Natural, Tasty And Durable

As much as possible, as little as necessary – this is the declared goal of the product heating process in terms of parameters, time and temperature. The UHT system masters this challenge with flying colours.

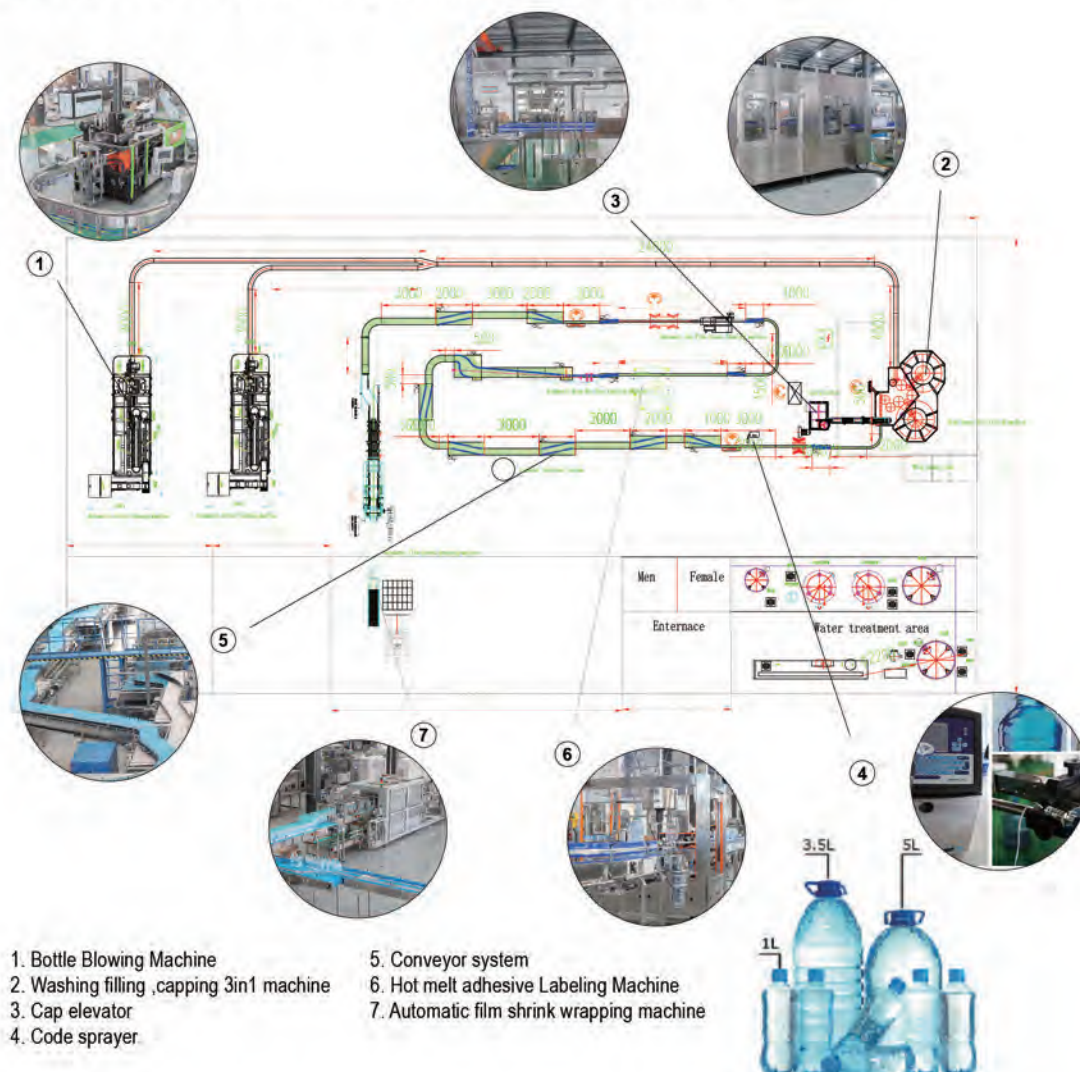
At A Glance

- Thermal product treatment for aseptic filling processes
- Used for juice products, soft drinks, teas, mixed coffee and teas and for dairy products.
- Comprises tubular or plate heat exchanger, optional deaeration module and homogeniser, buffer tank and media supply



Pure Water Production Line

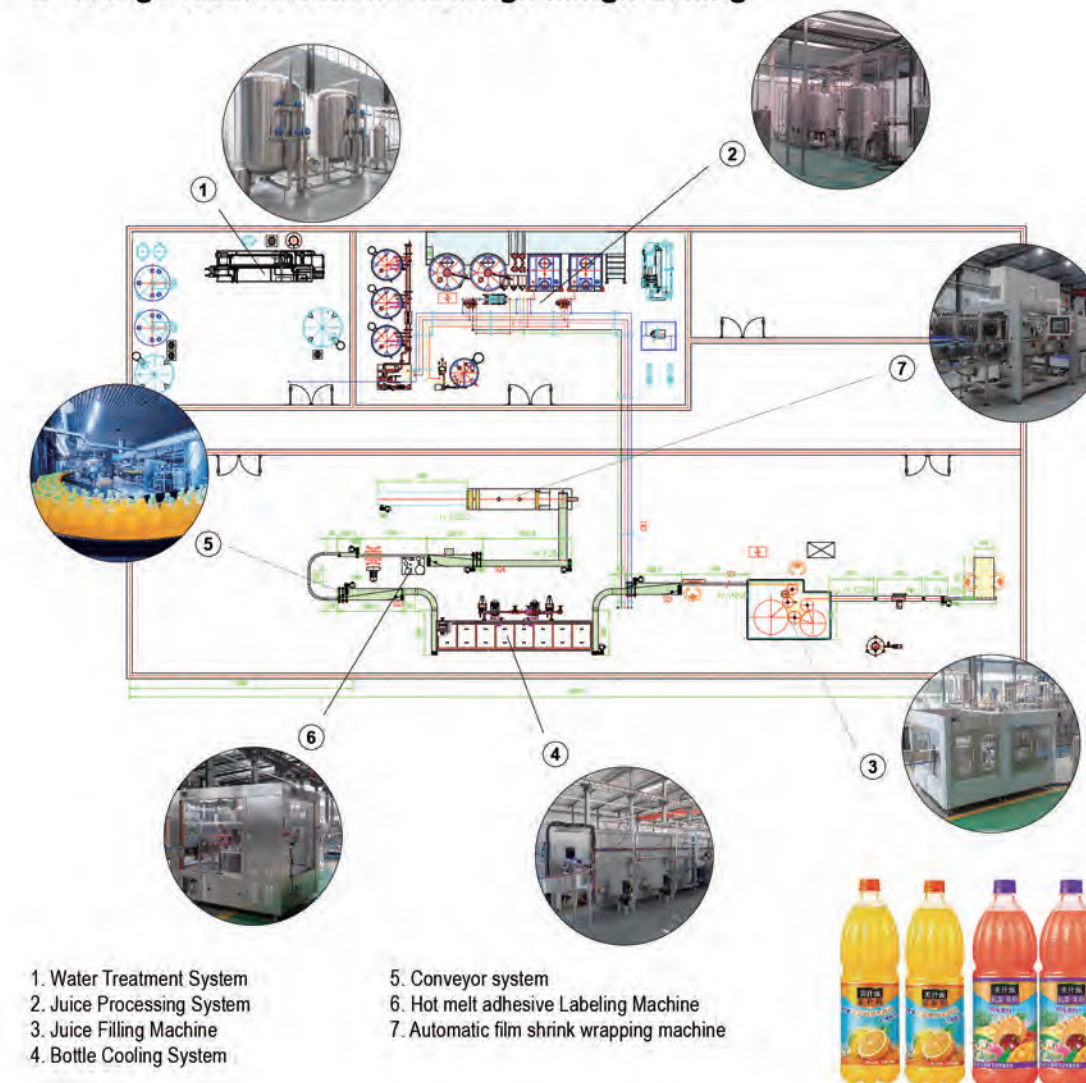
Beverage Ideal Solution-Blowing.Filling.Packing



1. Bottle Blowing Machine
2. Washing filling ,capping 3in1 machine
3. Cap elevator
4. Code sprayer
5. Conveyor system
6. Hot melt adhesive Labeling Machine
7. Automatic film shrink wrapping machine

Fruit Juice Production Line

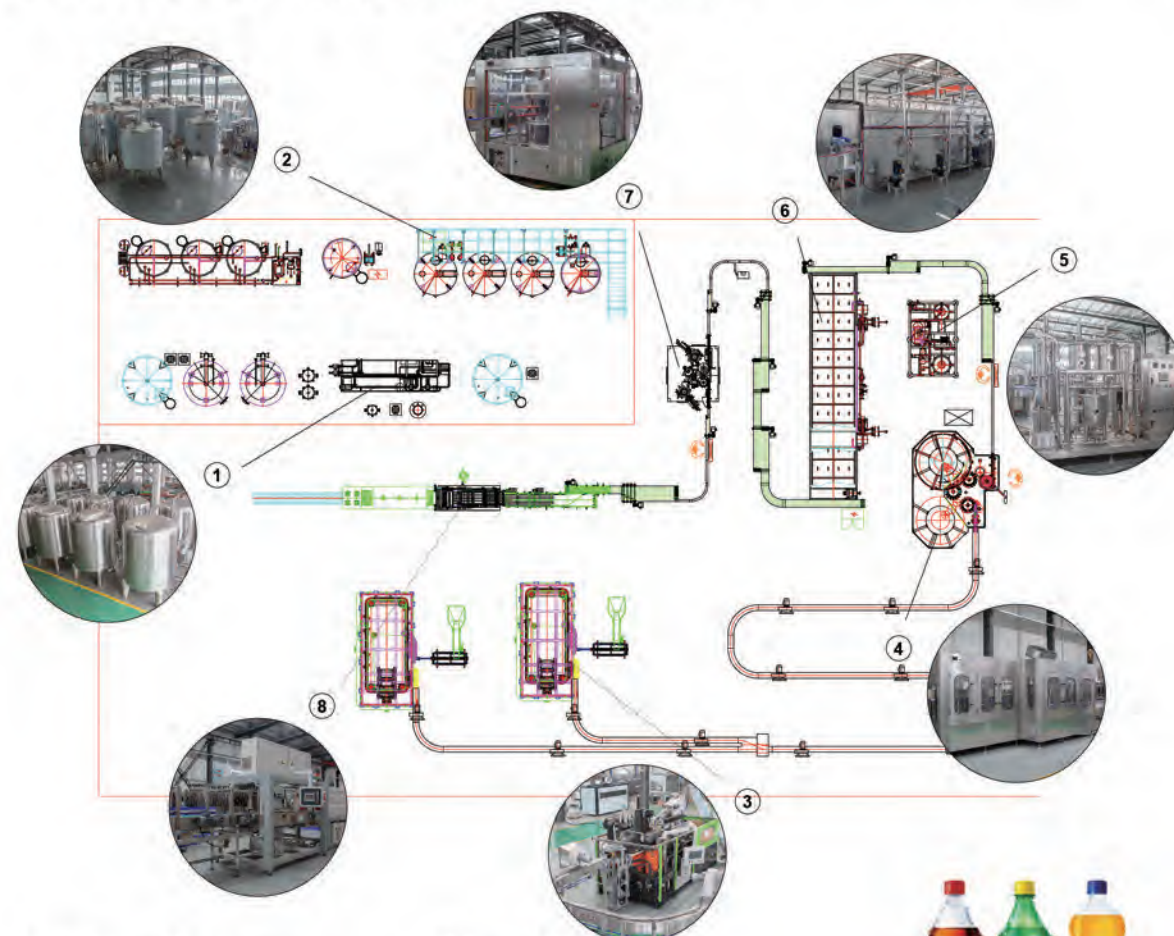
Beverage Ideal Solution-Blowing.Filling.Packing



1. Water Treatment System
2. Juice Processing System
3. Juice Filling Machine
4. Bottle Cooling System
5. Conveyor system
6. Hot melt adhesive Labeling Machine
7. Automatic film shrink wrapping machine

Carbonated Beverage Production Line

Beverage Ideal Solution-Blowing.Filling.Packing

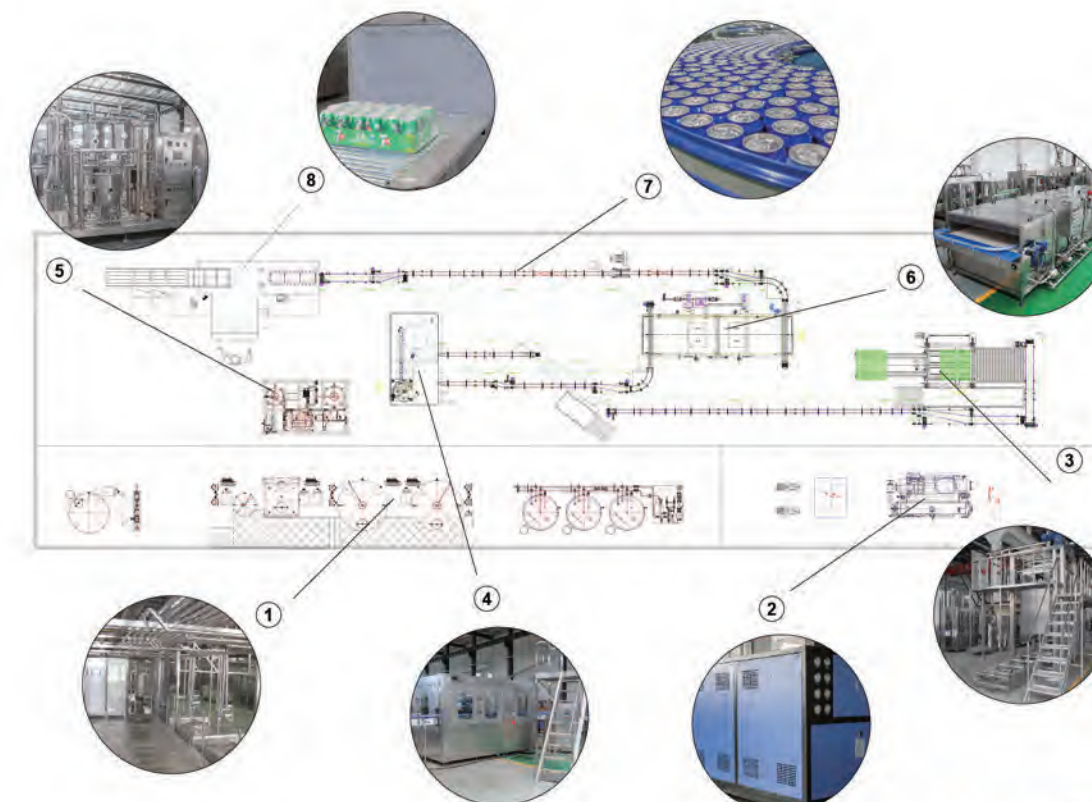


1. Water Treatment System
2. Carbonated Beverage Process Part
3. Bottle Blowing Machine
4. Carbonated Drink Filling Machine
5. Beverage Mixing Machine
6. Bottle warmer
7. Hot melt adhesive Labeling Machine
8. Automatic film Shrink Wrapping Machine



Pop Can Drinks Filling Line

For Every Beverage Factory



1. Beverage Pre-Process system
2. Cooling system
3. Automatic depalletizer machine
4. Automatic Can filling&sealing machine
5. Beverage Mixing Machine
6. Bottle warmer
7. Conveyor system
8. Cans packaging system

