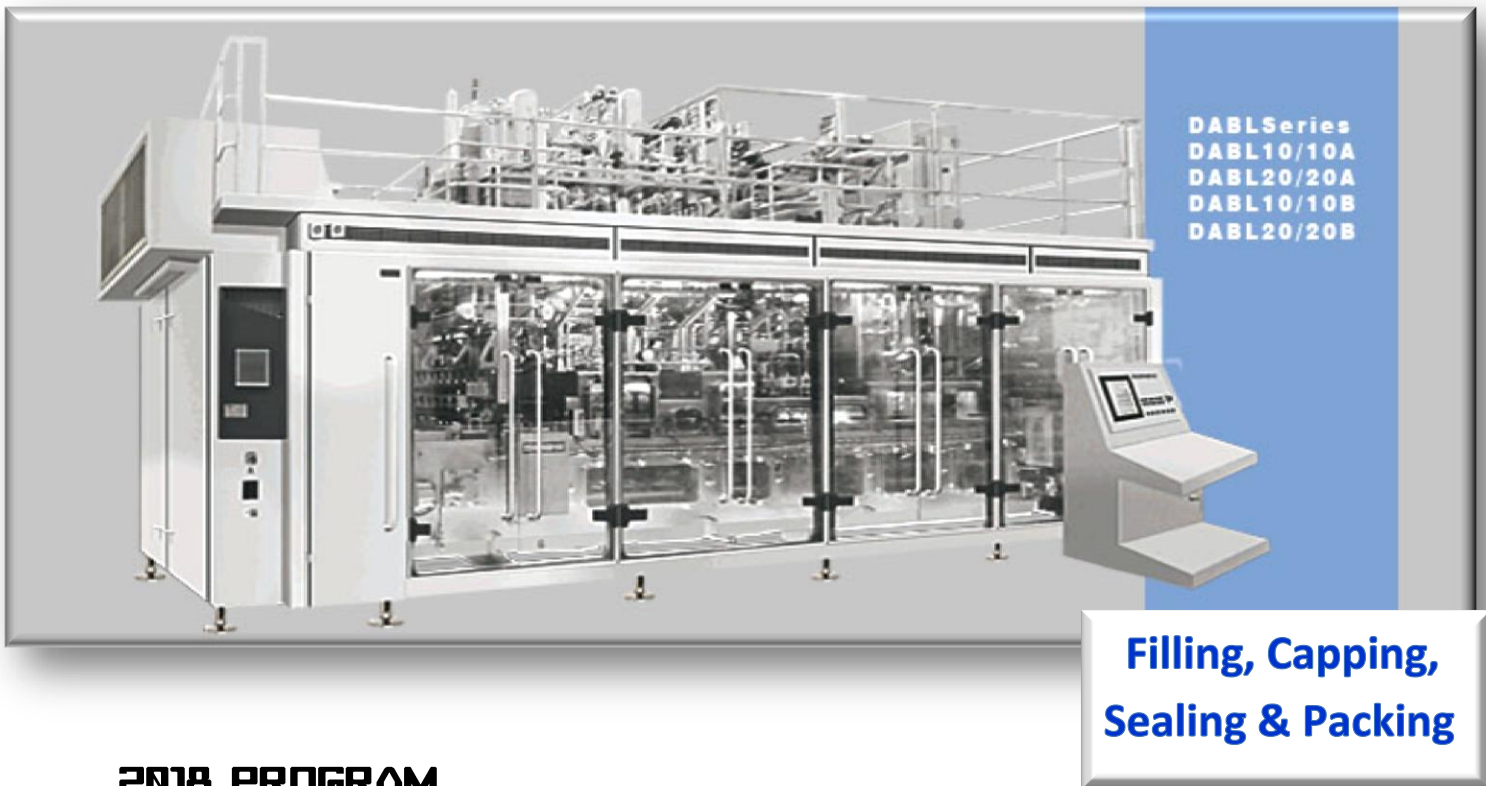


An Overview Of Can Mold *ai* Solutions

Artificial Intelligence



2018 PROGRAM

CAIS (Can Mold AI Solutions) a Division of Pet All Manufacturing Inc.

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Introduction

CAIS (Can Mold AI Solutions) is a standalone division of Pet All Manufacturing Inc., specializing in solutions AFTER blow molding. We have created this division following overwhelming demand for labor reduction in the post - blow mold area.

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CAIS covers the following areas of artificially intelligent machines to reduce or eliminate people from the process:

1. Leak Testing Machinery



90% manufactured in North America, we have a 20 year history of providing sophisticated leak-test equipment solutions. Single head systems test to 10,000 parts / hour, and multiple head systems up to 15 heads are available. Special systems are available on demand for containers up to 220 liters (drums).

Configurations include fallen bottle device, inclusion head, and soft wall compensation. Systems are often integrated into metal detectors, vision inspection and flaming before going into pack-out systems.

2. Metal Detection

Metal Detectors are integrated into the Leak Testers, and use plastic belts / parts to avoid metallic interference. Metal Detectors are also available to integrate easily into the blow molder.



3. Flaming

Flamers are made to provide 360° coverage on PE / PP bottles. 4 Burners are placed at strategic angles to capture the whole container (2 on each side).



4. Vision Inspection

Vision Inspection Equipment is complicated by the fact that each client requires special inspection for a particular container or group of containers. A preliminary inspection discussion, with accurate details and samples of defects needing detection, must take place.



Vision Inspection Systems from CAIS are generally stand alone, with infeed /outfeed provided.

3 Standard models are available.

CAIS Model 1 9,000 to 12,000 bottles / hour

CAIS Model 2 Up to 20,000 bottles / hour

CAIS Model 3 Up to 36,000 bottles / hour

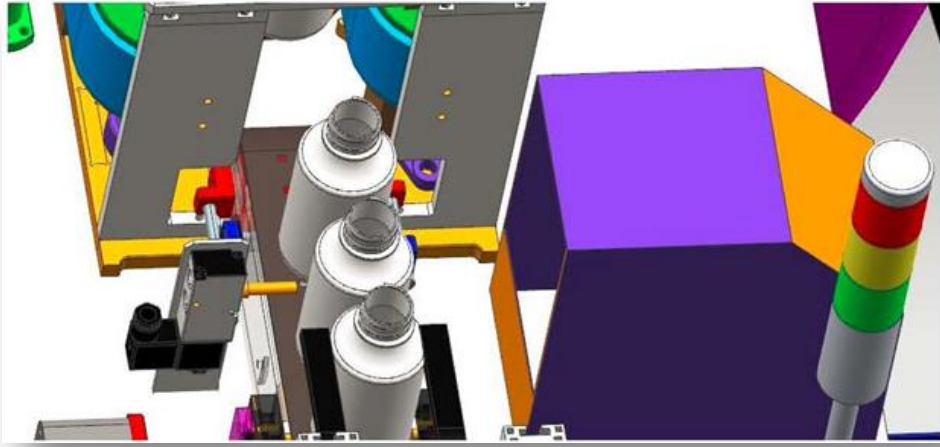
HDPE, PP, PET materials can be inspected.

Our standard, standalone unit (without conveyors) is 1870mm in length and 815mm width:

Conveyor length / types are variable.

A typical unit consists of 5 cameras, 2 on each side, and 1 on the top. A 6th camera is available for bottom inspection. Cameras are German Basler, with 2 million-pixel definition. High definition lenses Model Ricoh CSS50 are used. A Philips (8.5 LCD) Monitor is used.





Defects down to 0.2mm are detected, including surface contamination, black spots, color confirmation, neck ovality and deformed bottles. Defective containers have a Rejection Device depicted in image (left).

Other items that can be vision inspected:

Print Code Inspection and Label Detection



Label Detection Equipment



Print Code Detector

5. Semi -Automatic Bag Packing



- For round and oval bottles 200ml - 6 Liters standard
- 500ml up to 3,600 per hour

The system is for empty bottles. It puts them into sets, and 1 operator puts a bag to the machine each cycle. The machine pushes the bottles into the bag, and then seals the bag with a hot seal device. A different system is available for rectangular bottles up to 6 Liters.

Fully Automatic System

- A fully automatic system is available, which feeds the plastic bag from a roll.
- 2 sides or 4 sides can be heat sealed.
- The finished bag is slid off of the table automatically.
- A robot pick and place is also available to stack and interleave the plastic bags, upon request.

6. Automatic Box Packer



Empty bottles are fed by infeed conveyor, assembled and picked up by gripper robot, and then placed into boxes in layers. Oval, cylinder and rectangular bottles are normal.

Semi-Automatic

The system is available as a simple packer, with 1 box per time placed under discharge.

Fully Automatic

The fully automatic has a row of boxes, and pushes out the filled box before replacing it with an empty box. Standard, agreed box sizes are advisable.



With the capability up to 20,000 bph, this production line is applicable for the packaging production of household bottle products. The integrated line includes bottle unscrambling machine, bottle erecting machine, high precision rotary filling capping machine, cap erecting machine, intelligent case packing machine, carton forming machine, partition application machine, weighing rejecting machine, case sealing machine, line transportation and intelligent control system etc. Featuring high automation, this is the best solution for industrial production.

7. CAIS Automatic Palletizer



The CAIS Auto Palletizer is a semi-automatic system to place empty bottles onto trays, or flat sheets (slip sheets). Bottles are conveyor fed onto the packing platform. A calculator records bottles for 1 tray, and then the bottle pusher transfers them onto a tray. An operator is required to place the next tray onto the stack.

Container sizes are 200ml to 5 Liters. The ratio between height and diameter should be less than 4.

Output: 3000 to 4000 bottles / hour

Packaging Sizes: Length 400 to 1200mm

Width: 400 to 650mm

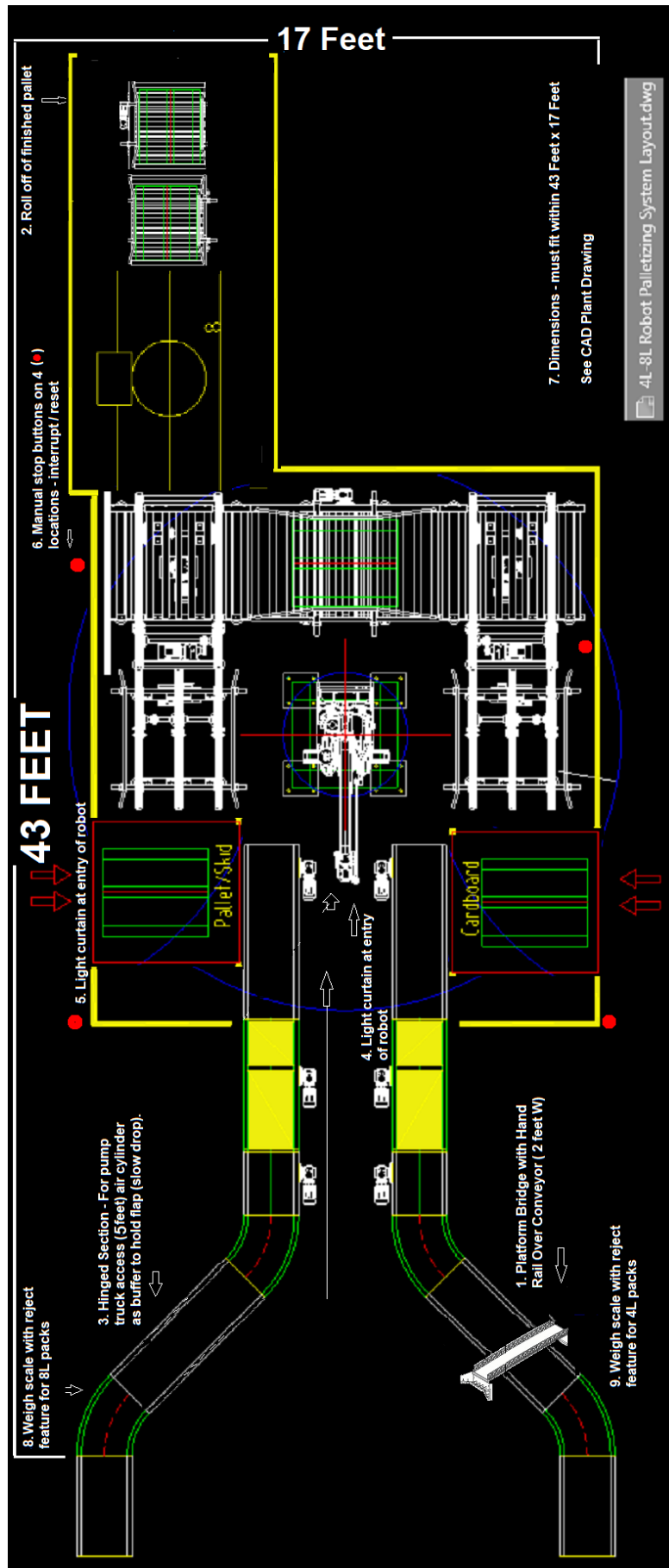
Height: 30 to 300mm

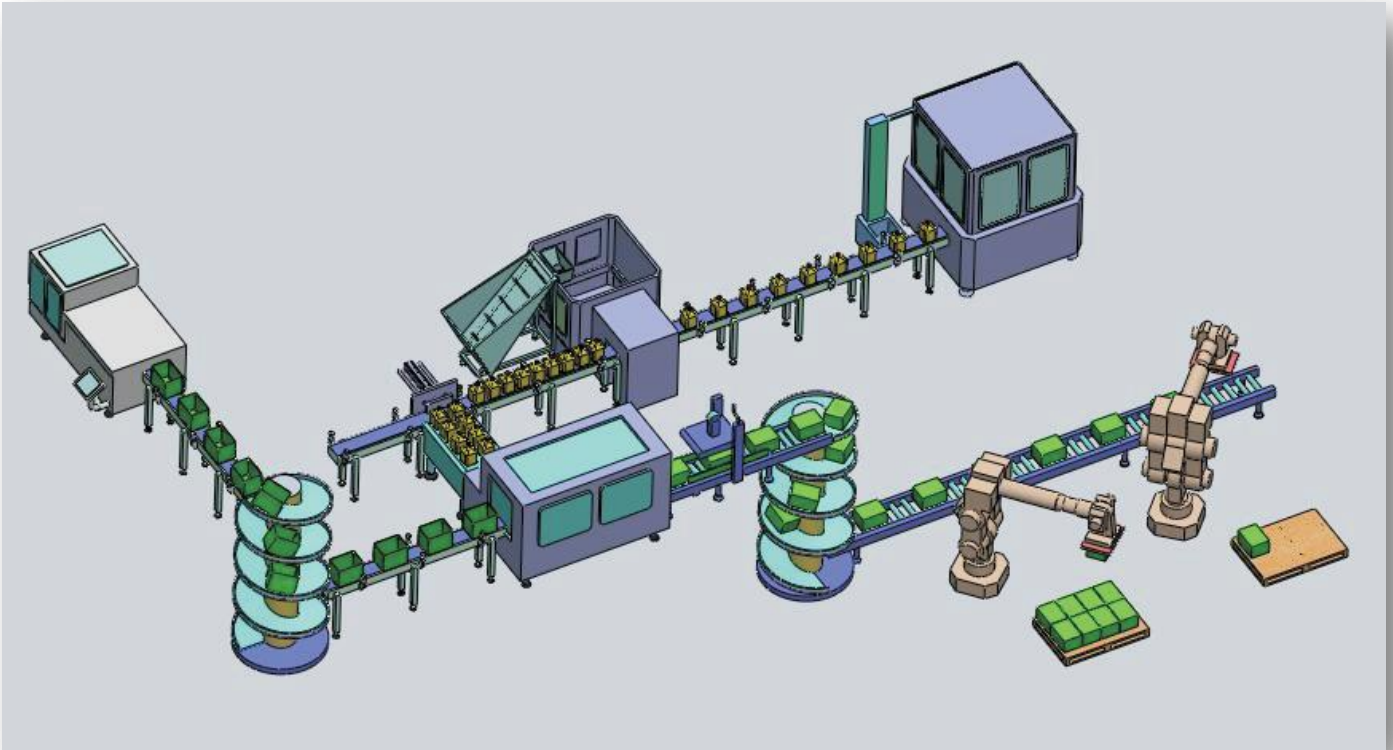
Note: Can be supplied fully automatically with robot system for take-out.

8. Fully Automated Complete Pack-out Plants

(For Empty or Filled Bottles)

CAIS can supply fully automatic plants. A typical example of a recently supplied plant is shown below:





A plant may include:

- Box Packing
- Bag Packing
- Weight Checking
- Robot Palletizing
- Robot Inter-sleeving
- Conveyor Transporting of Stacks
- Automatic Wrapping of Palletized Stack Removal

A further plant, before the above, may involve:

- Blow Molding
- Labelling / Sleeving
- Filling
- Capping

9. Highly Automated, Sophisticated Packing Lines (Filling, Capping Sealing)

CAIS, in partnership with one of Asia's largest manufacturers of automated, highly sophisticated lines after the bottle is blow molded, offers the following systems in filling, capping, sealing:

(9.1) DUBL Automatic Linear Clean Type Plastic Bottle - Filling, Capping, Sealing Equipment



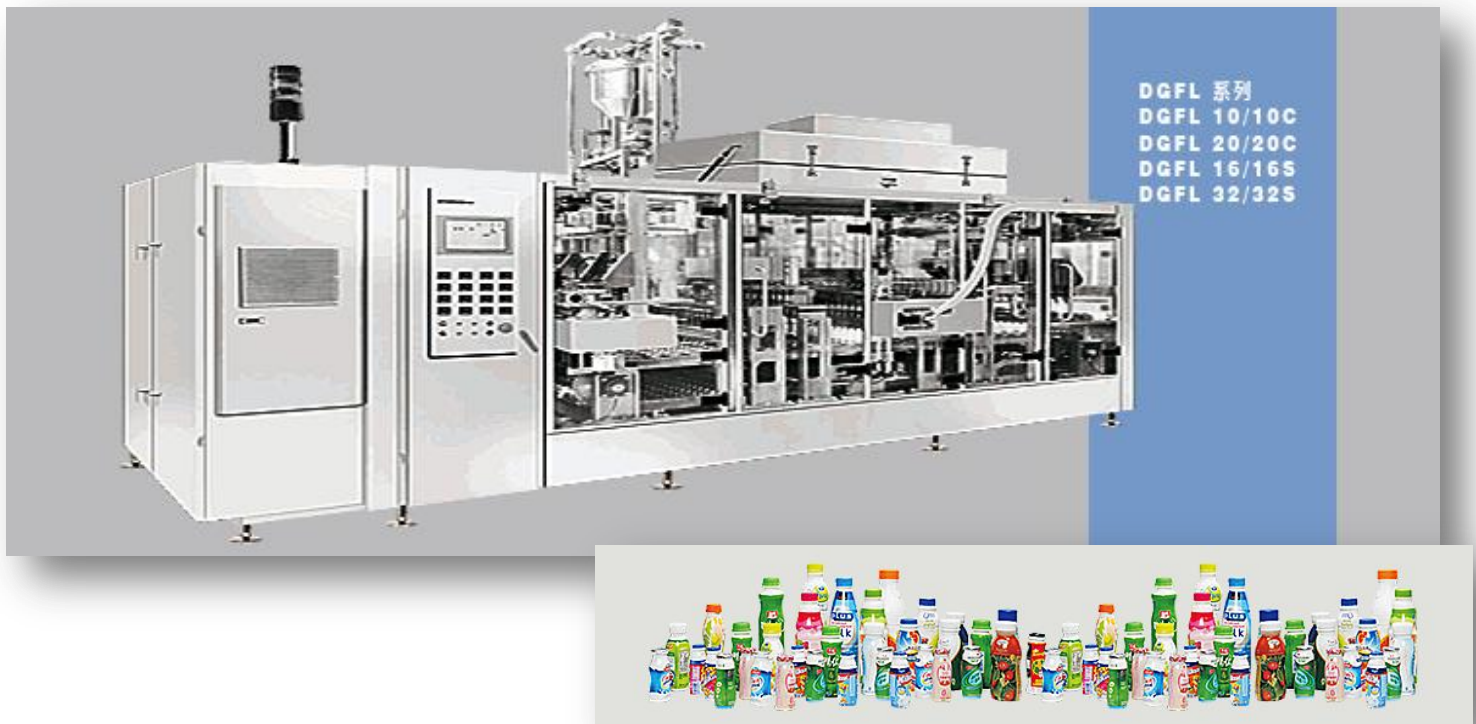
DUBL Series

- 10/10 10,000 b.p.h in 350ml size
- 20/20 20,000 b.p.h in 350ml size
- 28/28 28,000 b.p.h in 350ml size

DUBL Series equipment could automatically accomplish bottle unscrambling, bottle input, bottle picking, volumetric filling (fruit dynamic mix, cap transport, cap torqueing (sealing), bottle output and product transport. With the optional independent clean chamber, bottle inside sterilization and cap inside sterilization function, the ultra-clean type equipment could reach near LOG3 reduction in sterilization efficiency, effectively prolonging the product hygiene standard and shelf life. With the linear module design, this series of equipment is easy for combination and extension, high in entire machine hygiene level, and especially suitable to the high sensitive production of neutral and low-acid products.

Volume: 100-500ml

(9.2) DGFL Automatic Clean Type Plastic Bottle Filling Capping (Sealing) Equipment



DGFL Series:

- 10/10 c 10,000 b.p.h (350ml)
- 20/20 c 20,000 b.p.h (350ml)
- 16/16 s 20,000 b.p.h (100ml)
- 32/32 s 40,000 b.p.h (100ml)

DGFL Series equipment could automatically accomplish bottle unscrambling, bottle input, bottle picking, volumetric filling (fruit dynamic mix), cap transport, cap torqueing (sealing) , bottle output and product transport. With the linear module design, this series of equipment is easy for combination and extension, high for entire machine hygiene level, and especially suitable to the production of cold chain product.

Volume: 100-500ml 60-200ml

(9.3) DABL Automatic Linear Aseptic Plastic Bottle Filling Capping Equipment



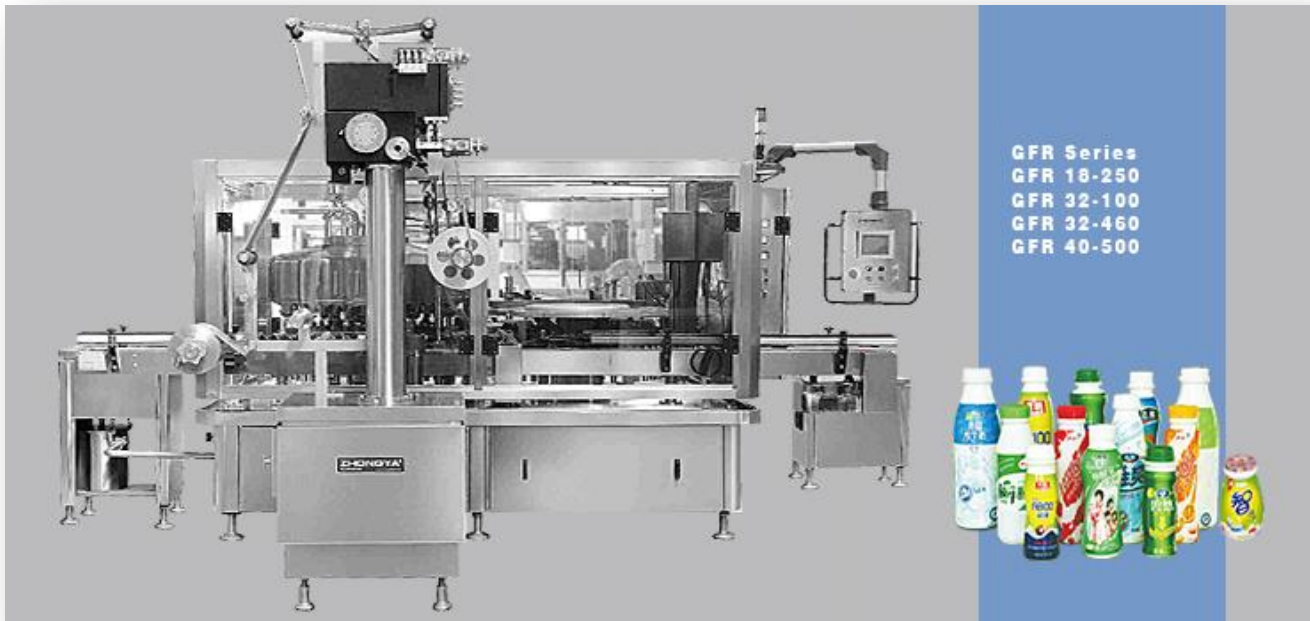
DABL Series:

- 10/10 A 12,000 b.p.h (500ml)
- 20/20 A 24,000 b.p.h (500ml)
- 10/10 B 12,000 b.p.h (800ml)
- 20/20 B 24,000 b.p.h (800ml)

Applicable for the aseptic bottle packaging of neutral and acid liquid food, **DABL equipment** could fully automatically accomplish the functions of bottle input, bottle picking, bottle transfer, bottle sterilization and drying, volumetric filling, cap sorting, cap sterilization and drying, cap applying, cap torqueing, bottle output, bottle placing and product transport. With the adoption of advanced dry sterilization technology and linear step equipment structure, this machine features extensive lowered footprint space and operating energy consumption, and ranks first in the selecting for bottle liquid aseptic packaging equipment.

Volume: 100 - 600ml or 0.1 - 1.5L

(9.4) GFR Automatic Plastic Bottle Rotary Filling Sealing Machine



GFR series machines are applicable to the packaging production of milk, lactobacillus beverage, milk beverage, fruit juice, etc. The whole process from vacuum negative pressure filling, cap-forming, capping, high-frequency sealing and product transportation is completed full-automatically. These machines are equipped with world famous top brands systems of PLC, touch panel, driver, temperature control, photoelectric control, pneumatic control, automatic lubrication etc. This series of machines, which have the optional systems of 100-class laminar flow protection, high-temperature filling etc., are capable of connecting with bottle un-scrambler, bottle rinser, tunnel type sterilizer, label sleeve shrinker, capper, secondary-packaging equipment to realize the full-automatic high-speed production line.

GFR Series:

- 18 - 250 15,000 b.p.h (100ml)
- 32 - 100 8,000 b.p.h (100ml)
- 32 - 460 27,000 b.p.h (100ml)
- 40 - 500 32,000 b.p.h (100ml)

Volumes:

- 80 - 500ml (18 - 250)
- 500 - 1000ml (32 - 100)
- 80 - 500ml (32 - 460)
- 80 - 500ml (40 - 500)

(9.5) BFC Blowing, Filling, Capping Integrated Machine



- BFC 14 | 15 | 15 24,000 x 500ml b.h
- BFC 20 | 60 | 20 36,000 x 500ml b.h

Integrating the bottle blowing, filling, capping systems, this machine is widely used in the packing of liquid products such as water, juice, tea beverage, carbonated drink, milk, etc. especially for the packaging application of lightweight PET bottles. Fully automatic accomplishing parison unscrambling, parison rinsing, heating, bottle blowing, filling, capping, cap torqueing and product transporting, the machine features high efficiency, low energy consumption, hygienic, safe and reliable operation, and is the ideal equipment for mass production in large-medium scale drink enterprises.

Volume: 100ml - 2.5L (Both Models)

(9.6) GF Plastic Bottle Filling, Capping (Torqueing) Line



GF:

- 16 / 8 3500 bh (1 - 3L)
- 18 / 6 - 5L 4000 bh (1 - 5L)
- 26 / 8 - 5L 6000 bh (1 - 5L)
- 24 / 16 / 10 10,000 bh (100ml - 1L)
- 48 / 16 20,000 bh (100ml - 1L)

GF series machines are applicable to the packaging production of high value- added materials as yoghurt, seasoning, household chemicals and oil etc., and the whole process from plastic bottle unscrambling, weighing filling, cap (pump) sorting, press (screw) capping, and product transportation is completed full-automatically. These machines can be equipped with optional systems of electronic weighing measurement system or electromagnetic flowmeter measurement system. It is performance effective equipment featuring high filling precision and high speed.

Volume: 100ml to 5L

(9.7) XTB Automatic High Speed Intelligent Wrapping Equipment for Bottles



XTB Series Automatic Equipment is applicable for the downstream packaging of multi-pack cup products, preform cup products and bottle products, which automatically accomplishes cardboard picking, product grouping, cardboard and product synchronized transportation, cardboard and product positioning, edge folding, glue spraying, bottom sealing and output. The packaging material used in this series equipment is cardboard, which is excellent in surface printing, environment friendly without pollution and has good market prospects. Featured stable performance, easy operation, convenient maintenance and high cost-efficiency-rate, this equipment ranks the first in the selection of automatic downstream packaging production equipment for modern enterprises.

XTB	10,000 - 40,000	Cartons / hour	Single / Double Layer
XTBD	10,000 - 20,000	Cartons / hour	Single / Double Layer
XTBP	10,000 - 40,000	Cartons / hour	Single Layer
XTBG	10,000 - 40,000	Cartons / hour	Single Layer

XTBP - For Bottles: Ø30 - Ø75 mm

Format of Bottles (packed in boxes):

- 2 x 2 2 x 3 2 x 4
- 1 x 2 1 x 3 1 x 4