Automation Equipment—Filling and Labeling Machine



Filling Machine

In order to meet the market demand, Kinbio has developed the multi-functional desktop filling and labeling machine, with high filling precision and small dimension. The equipment adopts turn table and complete several processes of material unscrambling, bottle feeding, reagent filling, cap feeding, detecting, pre-capping / film punching, defective rejection, labeling and coding and discharge. It is suitable for the filling and packing of immune reagents, biochemical reagents and blood coagulation reagents.

With the continuous development of market and technology, the application scope of the equipment has gradually expanded to medicine, food, daily chemicals, pesticides and other special industries. In production, we usually separate solutions of various specifications in different containers. On the premise that the height of the solution bottles is basically the same, based on compatibility considerations, we have specially developed double-position full automatic filling machine, full automatic filling machine, full automatic filling machine, full automatic filling machine, automatic aluminum foil sealing filling machine, semi-automatic filling machine and manual filling machine, etc., through multiple automatic filling procedures to achieve Various filling requirements and improve filling efficiency. Some models only need to replace the corresponding parts to achieve model and function upgrades. High-precision syringe pumps or peristaltic pumps can be selected according to the different requirements of users' filling precision. Equipment can be customized according to customer needs to meet different filling needs.





Automatic caps unscrambling and feeding



Automatic labeling

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Main Features

- 1. Human-machine touch interface, bilingual system, easy operation;
- 2. Pneumatic control, mechanical position, high filling speed, high filling precision;
- 3. PLC control system, stable operation, reliable quality;
- 4. It is a multiple-functional machine. Different reagents can be filled after the spare fittings are replaced;
- 5. With intelligent detection, it will not fill liquid if no bottle and automatically stop and give an alarm in case of no cap;
- 6. Counting function is available to facilitate production management and output calculation;
- 7. Can store ten programs of different filling data;
- 8. Material contact parts are made of SUS304 stainless steel, corrosion resistance and easy to clean, which meets the requirements of GMP.





Comparison of Different Models

| Model | Double station automatic filling machine | | Automatic filling machine | | Automatic double-cap filling machine | | Automatic centrifuge tube filling machine | | Automatic aluminum foil sealing filling machine | | Semi-automatic filling machine | | Manual filling machine | |
|----------------------------------------|--------------------------------------------------|------------------|--------------------------------------------------|------------------|--------------------------------------------------|------------------|--------------------------------------------------|------------------|--------------------------------------------------|------------------|--------------------------------------------------|------------------|--------------------------------------------------|------------------|
| | GZ450-1 | | GZ350-1 | | GZ350-1-A | | GZ350-1-B | | GZ350-1-C | | GZ350-2 | | GZ350-3 | |
| Optional pump head | Single syringe pump Double syringe pump | Peristaltic pump |
| Filling volume(ml) | 0.03-3 | 0.2-60 | 0.03-3 | 0.2-60 | 0.03-3 | 0.2-60 | 0.03-3 | 0.2-60 | 0.03-3 | 0.2-60 | 0.03-3 | 0.2-60 | 0.03-3 | 0.2-60 |
| Filling precision | < ±1% | < ± 5% | < ±1% | < ± 5% | < ± 1% | < ± 5% | < ±1% | < ± 5% | < ±1% | < ± 5% | < ± 1% | < ± 5% | < ±1% | < ± 5% |
| Filling efficiency (pcs/min) | 40-90 | 60-90 | 20-45 | 30-45 | 20-45 | 30-45 | 25-45 | 30-45 | 20-45 | 30-45 | 20-40 | 20-45 | 12-30 | 12-30 |
| Air supply (L/min) | >80 | | >80 | | >80 | | >80 | | >80 | | >60 | | >40 | |
| Air pressure(MPa) | >0.4 | | >0.4 | | >0.4 | | >0.4 | | >0.4 | | >0.4 | | >0.4 | |
| Dimension(mm) | 1800*1480*1500 | | 1100*900*700 | | 1000*1100*700 | | 1000*550*650 | | 1000*550*650 | | 700*900*600 | | 650*550*600 | |
| Weight(Kg) | About 750 | | 100-150 | | 150-200 | | 70-100 | | 70-100 | | 70-100 | | 50 | |
| Power source | 220V/50HZ/5A | |
| Power | 1000W | | 600W | | 700W | | 400W | | 400W | | 400W | | 200W | |
| Bottle carrying module | SUS 304 | | no | | no | |
| Inner cap carrying module | SUS 304 | | no | | SUS 304 | | no | | no | | no | | no | |
| Outer cap carrying module | SUS 304 | | SUS 304 | | SUS 304 | | no | | no | | SUS 304 | | no | |
| Material of sample injecting needle | SUS 304 | |

Note: I his parameter is for reference only, the specific customized products are subject to the actual product

Automation Equipment—Filling and Labeling Equipment

Double Position Full Automatic Filling Machine GZ450-1

The double-position automatic filling machine is a double-position filling system independently developed by Jinbiao Biological, which makes production more efficient and fast, and increases productivity while filling accurately. The equipment uses manipulator to pre-screw the cap, which greatly reduces the defective products of skewed caps and ensures that the reagent filling does not leak. The manipulator automatically rejects the defective products, which improves production efficiency while ensuring high-quality product output. It is suitable for a variety of reagent bottles such as cryotubes, centrifuge tubes, etc.



Full Automatic Filling Machine GZ350-1

Cryotubes filling machine is solution distribution equipment of bottle unscramble, filling, screwing (seal / press) for products such as chemiluminescence reagent, microbial reagent, coagulation reagent, cell reagent, trace element reagent, etc. It is suitable for single-cap reagent bottles, such as new coronavirus antigen extraction tubes, cryopreservation tubes, etc.



Automation Equipment—Filling and Labeling Equipment



Full Automatic Double Cap Filling Machine GZ350-1-A

Double caps filling machine is a full-automatic filling equipment integrating automatic bottle feeding, reagent filling, inner cap feeding and outer cap screwing functions. After the bottle is fed onto the turntable, the machine will then finish the processes of reagent filling, inner cap and outer cap placing and cap screwing. It meets one-bottle with two caps filling demands and greatly improves the filling efficiency. Suitable for all kinds of dropper reagent bottles, etc.





Full Automatic Centrifugal Tube Filling Machine GZ350-1-B

Centrifugal tube filling machine is a full-automatic filling machine integrating automatic bottle feeding, reagent filling and cover pressing functions. The vibrating plate automatically transport the tubes to the turntable, Through the special design, the centrifugal tube will be placed in right direction consistently, after the reagent is filled automatically, the tube body is moved forward to the closing position. The cover is automatically pressed by closing module. The whole machine could run smoothly and position accurately without hurting to centrifugal tubes.





Automation Equipment—Filling and Labeling Machine

Full Automatic Alluminum Foil Sealing Filling Machine GZ350-1-C

Aluminum foil sealing filling machine is a full-automatic sealing and filling device integrating automatic bottle feeding, reagent filling, aluminum foil hot sealing functions. After the bottle is fed onto the turntable, the machine will then finish the processes of reagent filling, and hot sealing. At the hot sealing work position, the aluminum foil will be punched on the bottle by the punching blade, and hot sealed at the same time. The optical detector can inspect if there are packing leakage (automatically alarm if there are leakage) before discharge from the turntable orderly. It is suitable for single or multiple rows of reagent tubes.





Semi-automatic Filling Machine GZ350-2

The semi-automatic filling machine is a semi-automatic filling equipment independently developed by Kinbio for special-shaped biochemical bottles. Manual bottle placing, automatic filling, automatic capping, automatic cap screwing, automatic discharging, and labeling stations can be added after the filling output is completed according to customer requirements. The equipment is simple and convenient to operate, and the performance of the machine is stable, which greatly improves the production efficiency and production yield.





Automation Equipment—Filling and Labeling Equipment



Manual Filling Machine GZ350-3

The manual filling machine is a manual filling equipment independently developed by Kinbio. Bottles are filled and capped by manually placing bottles, manually placing caps, automatic capping, and automatic discharging. Labeling stations can also be added after the filling is completed according to customer requirements. The equipment is simple and convenient to operate, and the performance of the machine is stable, which greatly improves the production efficiency and yield.



Side Vertical Labeling and Coding Machine CLT500

The side vertical labeling and coding machine is a high-speed labeling and coding equipment independently developed by Kinbio . It consists of six parts: bottles conveying mechanism, labels conveying system, labeling system, coding system, discharging mechanism and a control operating system. It has a compact structure, a exquisite appearance, which is stable and efficient. It is recommended to be used online with the filling equipment, so as to realize the integrated production of solution filling, labeling and coding, which reduces labor costs and improves labeling and coding efficiency.

*Technical Parameters: Labeling efficiency: 50-80pcl/min Label spacing: >3mm Label width: 8-40mm Maximum outer diameter of label roll: 300mm Coding resolution: 600dpi

Coding resolution: 600dpi Print content: self-editing Bottle outer diameter suit: 8mm-12mm Label length: 12-55mm Inner diameter of label roll: 75mm Equipment dimension: 680x690x380mm Coding method: thermal transfer



Production Auxiliary Machine

Membrane Coating Machine PJ100

This machine is mainly composed of a gold roll and a transparent organic glass reagent pool. It is suitable for the reagent of a specific volume to pour it into the reagent pool, and then put the membrane material. The reagent is evenly distributed on the membrane material in horizontal and vertical direction. The PTFE material is a kind of inert material, which is not easy to adhere to biological protein, which is convenient for disassembly and cleaning, and avoids cross contamination.



PJ100



MTB300

Manual Laminator MTB300

MTB300 is a product researched and developed for the condition that it is difficult to position the auxiliary materials when laminating and the waste rate is high. The equipment adopts the digital motor to drive the ruler and stops near to the cutting line on PVC backing card. It facilitates the workers to laminate the sample pad, conjugated pad and absorbent pad onto the PVC backing card along the ruler edge. It greatly improves the efficiency and precision of laminating. It is especially suitable for the scientific research units and production customers who produce the lateral flow test strips.

Rolling Type Manual Cutter GD300

Rolling type manual cutter is a manually operated equipment. Set the cutting width by adjusting the material baffle. Cut all kinds of materials (paper, glass fiber, chemical fiber, etc.) into the specified width of the semi-finished products by the rolling round blade. It is simple and practical, environmentally safe. It is one of the necessary auxiliary equipment for the production of colloidal gold Immunoassay strip, dry chemical test paper, and dry bio-chemical test paper.



GD300



JPY300

Sample Processor JPY300

This equipment is used for pretreatment of glass fiber and polyester materials in immunochromatographic production. It consists of three parts: feeding platform, solution tank and upper and lower pressure rollers. First, the sample pad to be processed is sent into the solution tank through the feeding platform, and coating is completed in the processing solution tank. Then the processed sample pad is driven by the stepping motor forward, the excess solution is squeezed out and sent out after passing through the upper and lower pressure rollers. The device has simple structure, convenient operation, and uniform processing, which greatly improves the processing efficiency of the sample pad.

Packaging Raw Materials For Rapid Test Strips

Kinbio provides packaging materials kit which contains plastic cassettes, FOB tubes, silica gel, aluminum foil pouches, droppers, etc. Differernt types are available for your comparison in making rapid test strips. Bulk orders are welcome for each product.



FOB Bottles & Buffer Solution Tubes



Plastic Cassettes



Dropper & Aluminum Foil Pouch

