

GLX2-25 Model Vial Liquid Washing-Drying-Filling-Stoppling Production Line



The GLX2-25 model vial liquid washing-drying-filling-stoppling production line is composed of the QCL series vertical ultrasonic bottle washing machine, ASMR tunnel hot air circulation sterilizing oven and KGF series vial liquid filling-stoppling machine, whilst the three component machines can also be used independently. Suitable for production of vial injection of 2-25ml, it can complete more than 20 procedures such as spray and water filling, ultrasonic rough washing, bottle exterior wall washing, bottle interior wall continuous twice circulation water washing, primary blowing, primary fresh water washing, continuous twice blowing, bottle exterior wall blowing, preheating, drying, sterilizing, pyrogen removing, cooling, front gas charging, filling, rear gas charging, stoppling, and etc.

The whole line adopts PLC main control, frequency converter and touch screen control technology with stable and reliable running. The touch screen can display running dynamics of each single machine, water pressure, air pressure, wind pressure and temperature at each control point. The display of each on-off status and faults, fault self-diagnosis, fault analysis and eliminating methods realizes automatic control during the whole production. The production line is provided with the three-machine automatic control and balancing device to ensure balanced and reliable production.

Features

- ◆ The bottle washing machine adopts mechanical hands to clamp the bottles, suitable for vials of various specifications.
- ◆ The water-gas spray needles adopt the reciprocating tracking insertion method for bottle washing, featured by excellent washing effect and energy saving. It is also provided with a device that prevents the needle holder from shaking to enhance the accuracy of the spray needle's insertion into the bottle and reduce the occurrence of needle breakage.
- ◆ The water and gas pipes are totally separable from the spray needles, so that cross contamination is avoided and GMP requirements are satisfied.
- ◆ The buffer block is installed before the bottle feeding screw of the bottle washing machine to protect the screw and reduce bottle breakage.
- ◆ Bottle discharging is realized by the integral imported synchronous belt that is connected to the bottle pushing block to convey ampoules, a structure that ensures stable and reliable operation.
- ◆ The oven adopts hot air circulation heating to achieve temperature and energy saving.

- ◆ The oven is provided with the function of protecting against sudden power-off to ensure safe running.
- ◆ The oven can be equipped with the circulation water cooling device that does not consume wind volume in the room, whilst reducing the risk of unbalanced differential pressure in the room and achieving good cooling effect;
- ◆ The oven can be equipped with the differential pressure automatic balancing and regulating system to reduce the problems of deviation at the high temperature section caused by unbalanced differential pressure in the room and oven, temperature rise in the filling room, washing and drying room, and etc.
- ◆ The oven is provided with DOP inspection ports (including inspection ports for wind pressure, wind speed and dust particles).
- ◆ The cooling section in the oven can be provided with the sterilization function (selective for FDA).
- ◆ The oven mesh belt can be equipped with the ultrasonic and CIP cleaning systems.
- ◆ The oven cavity can be subject to all-round, multi-angled high pressure water washing.
- ◆ The filling machine adopts the horizontal synchronous belt bottle conveying mode, featured by high speed, accurate bottle distribution and convenient replacement of parts.
- ◆ The conveying plane where the bottle bottom is located has a certain distance to the work table, so as to benefit the passing of the 100-grade laminar flow and avoid turbulent flow of polluted liquid medicines.
- ◆ The stoppling part of the filling machine adopts horizontal stopple conveying and horizontal round disc stopple suction, featured by convenient observation, easy feeding and high-speed stopple conveying.
- ◆ The filling machine can be equipped with the ceramic pump, stainless steel pump and peristaltic pump.
- ◆ The filling machine is provided with the functions of no filling in case of no bottle and no stoppling in case of no bottle.
- ◆ The filling machine can be equipped with the servo filling system. (Delta, Mitsubishi, Schneider)

Optional Add-on

According to customer requirements, it can also be equipped with the following:

- ◆ Control system of such brands as Siemens, Schneider, Mitsubishi, Delta, and etc;
- ◆ Water pressure, air pressure, water temperature, ultrasonic strength, dust particles and wind speed online inspection, alarming, recording and printing systems;
- ◆ ORABS, CRABS, aseptic isolator system.

Technical Parameters

Product Model	QCL60+ASMR620/35 + KGF4	QCL60+ASMR620/43 + KGF6	QCL60+ASMR620/43 + KGF8
Applicable specifications(ml)	2-25(GB standard vial)	2-25(GB standard vial)	2-25(GB standard vial)
Number of filling heads	4	6	8
Capacity(pcs/h)	120(2ml)	180(2ml)	200(2ml)
Qualified rate of bottle washing	≥ 99	≥ 99	≥ 99
Breakage rate of bottle washing	≤ 0.1	≤ 0.1	≤ 0.1
Sterilizing temperature(°C)	300-350	300-350	300-350
Exhaust volume(m ³ /h)	3000	3000	4100
Filling accuracy(%)	≤ ±2.5 (mechanical-driven, ceramic and stainless steel pump) ≤ ± 0.5-1.0 (servo-driven pump)		
Qualified rate(%)	≥ 99	≥ 99	≥ 99
Air Cleanness (Class)	100	100	100
Speed of vacuum pumping (m ³ /h)	10	30	50
Capacitance	66.6	75.6	75.6

Power supply	385V 50Hz	385V 50Hz	385V 50Hz
Total weight(kg)	6300	6300	7900
Overall dimensions(LxWxH) (mm)	8,550 × 2,540 × 2,330	8,550 × 2,540 × 2,330	9,620 × 2,540 × 2,330

Product Model	QCL80+ASMR620/48 + KGF10	QCL120+ASMR800/55 + KGF12	QCL120+ASMR1250/ 60 + KGF20
Applicable specifications(ml)	2-25(GB standard vial)	2-25(GB standard vial)	2-25(GB standard vial)
Number of filling heads	10	12	20
Capacity(pcs/h)	300(2ml)	400(2ml)	500(2ml)
Qualified rate of bottle washing	≥ 99	≥ 99	≥ 99
Breakage rae of bottle washing	≤ 0.1	≤ 0.1	≤ 0.1
Sterilizing temperature(°C)	300-350	300-350	300-350
Exhaust volume(m3/h)	4100	7500	8,000-10,000
Filling accuracy(%)	≤ ±2.5 (mechanical-driven, ceramic and stainless steel pump) ≤ ± 0.5-1.0 (servo-driven pump)		
Qualified rate(%)	≥ 99	≥ 99	≥ 99
Air Cleanness (Class)	100	100	100
Speed of vacuum pumping (m3/h)	60	60	100
Capacitance	106.6	106.6	212.6
Power supply	385V 50Hz	385V 50Hz	385V 50Hz
Total weight(kg)	7900	9400	10900
Overall dimensions(LxWxH) (mm)	9,620 × 2,540 × 2,330	10,280 × 3,230 × 2,360	12,730 × 2,600 × 2,620