

# LTAG-16 Ampoule Washing Sterilizing Filling And Sealing Production Line

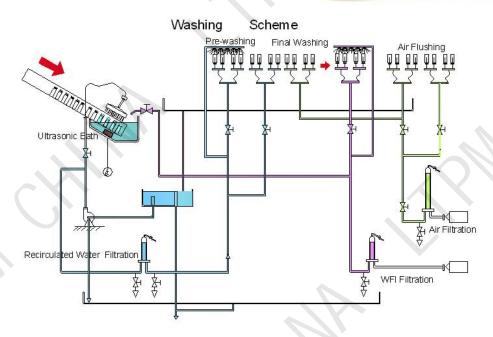


### **QCL-160 Vertical Ultrasonic Washing Machine**



#### **Description of Equipment**

Rotary washing machine consists of infeeding section,ultrasonic section and final washing section. Containers go through these sections for completion of the whole washing process which includes 1 station for ultrasonic washing, 6 stations for interior and 2 stations for exterior cleaning.



#### **Process Flow Diagram**

Station 1: Ultrasonic washing

Station 2: Recirculated water cleaning container inside and outside

Station 3: Recirculated water only cleaning container inside

Station 4: Sterile air purging container inside

Station 5: Fresh water cleaning container inside

Station 6: Sterile air purging container inside

Station 7: Sterile air purging container inside and outside

The containers are transported to the overfilling area for ultrasonic washing via a sloping conveyor and then singularly lifted up to the final washing station by a scroll located in the water bath. The containers turned upside down via neck by the plastic prism grippers.



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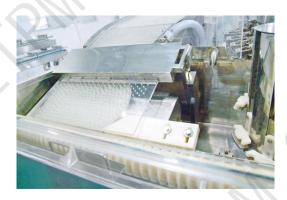
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**Stainless Steel Grippers** 



Lifting-up device



Overfilling and Ultrasonic Washing



Outfeed

Finally, the containers are transferred separately to the downstream tunnel via a special tooth belt outfeed device which avoid the breakage.



**Filter System** 

#### **PLC Control System**

The washing machine is fully controlled via Mitsubishi PLC and Proface touch screen(HMI) for operation and enter the operational data, which is of log-in only by input a dedicated 3 level password according to the program recipe. Error messages are displayed and indicated where the machine running in trouble. Moreover, there is a port for connecting external devices.

The alarm function is activated while the machine in the lack of washing medium and container such as:

- Lower Pressure of Purified Compressed air
- Lower Pressure of WFI
- Lower Pressure of Recirculated Water
- Lower Temperature of WFI
- Lower Temperature of Recirculated Water
- Main Parts of Machine in Failure



Consists of:

- Overfilling washing cover
- Transportation Scroll in water bath
- Lifting-up Device
- Stainless Steel Prism Gripper With Plastic Contact Surface
- Outfeed Guide Rail and tooth belt

# **Main Components List**

NT	E ' AN	N. 1.1	) / C /
No	Equipment Name	Model	Manufacturer
1	PLC	S7-200CN	Siemens
2	HMI	SMART LINE TOUCH	Siemens
3	Frequency converter	SINAMICS V20	Siemens
4	AC contactor	3TB44	Siemens
5	Main Motor	M2QA90L4A	ABB
6	Approach switch	PR12-4DA	Autonics
7	3-color signal lamp post	XVGB36MA	Schneider
8	Exhaust fan	OP200	Sunon
9	Temperature sensor	GUTIAN	GTAM
10	Pressure transmitter	DW803-A-C1	Duwei
11	Pump	CHL 16-30LSWSC	HANGZHOU
12	Pressure Gauge	YN100	Shanghai
13	Relay	MY2N-J24V	Omron
14	Miniature circuit breaker	C32/C20	ABB

15 Bearing	UCFLU206	Igus
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# **Technical Data**

Capacity	1-2ml: 35000-38000 ampoules/hour	
	3ml:32000-34000 ampoules/hour	
Ampoule size	1ml,2ml,3ml,5ml,10ml	
Broken rate	≤0.1%	
Ultrasonic power	800W	
Temperature of the circulation	40—60°C	
water		
Inner Air and water washing	3 times water ,3 time air washing	
Outer air and water washing	1 times water ,1 time air washing	
Power of motor	11kw(include electric heating)	
The amount of water for	0.6m³/h	
injection		
Pressure of water for injection	0.20 ~ 0.4Mpa	
Compressed air consumption	80m³/h	
overall	2141*2247*1297mm	
Weight	2800kgs	

#### SZA-620 Hot Air Circulation Sterilizing Drying Machine



#### Introduction

SZA-610 series hot air circulating tunnel sterilization oven using electric heating as the heat energy, the energy generated by the electric heating elements, the use of hot air circulating fan oven heating section of Class 100 clean air inside the bottle of convective heat exchange cycle, the required sterilization of the bottle the heat transfer, and continuous supply of fresh air, while eliminating air or saturated humid chamber heat, so as to achieve drying of the items are sterilized bottles.

The machine consists of stainless steel mesh belt conveyor bottle items are in the process of belt conveyor; the bottles pass the one hundred laminar flow air heat and circulation, so as to achieve sterilization drying effect. Low temperature inside the bottle after warming up to cooling high heat sterilization, sterilized bottle to complete the whole process. Among them, the heat sterilization section of the air, when the high temperature hot air through the fan filter purified by high wind form a cycle, so purification of the bottle in the purification of one hundred hot air circulation under wind pressure of rapid and uniform drying and sterilization, it must block the entry of outside air, water content of the hot and humid air through the exhaust port from the plane. Among them, the heating section of the air in the oven is heating cycle. Oven built-in temperature measurement points, the required sub-set temperature and automatically adjust the control.

# **Main Component**

	Ι		T
No	Item	Quantity	note
1	PLC control	6	Mitsubishi
2	Relay	8	OMRON
3	Switch Power	1	Mingwei
4	inverter	9	Mitsubishi
5	Touch Screen	1	PRO-FACE
6	Air Switch	1	Muller
7	Mini circuit breaker	10	Muller
8	AC Contactor	2	Siemens
9	Emergency stopper	2	Muller
10	Power light	3	Muller
11	Ultrasonic	1	Zhangjiagang

# Main technical parameters

Capacity	1-2ml: 35000-38000 ampoules/hour	
	3ml:32000-34000 ampoules/hour	
Ampoule size	1ml,2ml,3ml	
temperature Adjustable range	50°C ~ 350°C	
Temperature for sterilizing	280°C ~ 320°C	
PH Rate	≥1365	
endotoxin	Reduce 3 log	
Filter	Accept 400°C	
Temperature of out put	≤10°C	
Power	70kw(54kw)	
Cooling exhaust volume	2500—3500m³/h	
overall	4400*1550*2270mm	
Weight	3500kgs	

#### AGF-16 AMPOULE FILLING AND SEALING MACHINE



#### **I>Brief description**

The machine is a new generation of the ampoule filling and sealing machine for several size. It adopts the rectangular way to transfer ampoules, in such case, the transferring is steady, lower braking rate. A new type of clutch is mounted under the ampoule feeding hopper; therefore the ampoule can be stopped at any time while the machines are still running. So the ampoule consumption can be reduced. Electromagnetic switch is replaced with mechanical way in the part of filling stop system. It is reliable and durable. The traditional ampoule out-feeding way is abandoned, and ampoule collecting is reliable, the qualified filled ampoule is more excellent.

Main parts and fittings are made of stainless steel through precision casting. The accuracy and exchangeability of parts can be guaranteed. Besides, we use the SS pump to filling the liquid, the liquid dropping is under the control, and prevent ampoule blackening owing to carbonization.

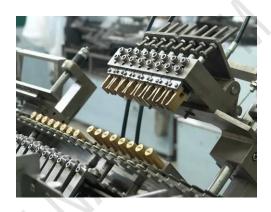


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# **Features:**

Our company is the earliest factory developing 45 degree transferring multi-nozzles filling and sealing machine for ampoule, now its users are distributed all over china.

Model	AGF Series from LTPM CHINA	Products from other COMPANYS
project		
materials	Surface and the key exterior parts are all made of	surface and key exterior parts are common steel
	stainless steel and the key cam is treated by	parts ,it is corrodible; cam is stainless steel parts,
	nitrogen and it is hard durable.	without nitrogen treatment, it is not wearable
performance	stable in operation, highly efficient especially for	Great shocks, cannot used for 1ml,
	1ml filling and sealing, mechanical way to stop	electromagnetic stop filling system is easy leading
	filling process, it is more reliable	to failures.
Main electrical	Imported Panasonic inverter and Schneider	Without inverter or poor-performance inverter, and
appliances	switches &power supply.	common switches, its performance is unstable.



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# **Main Component**

No	Item	Quantity	note
1	PLC control	8	AB America
2	Servo motor	17	AB America
3	Driver	17	AB America
4	inverter	2	AB America
5	Exchanger	1	AB America
6	Touch Screen	1	AB America
7	Switch power	1	AB America
8	Mini circuit breaker	8	AB America
9	AC Contactor	2	AB America
10	Emergency stopper	2	AB America
11	Power light	3	AB America
12	Ceramic Pump	16	Shenzhen

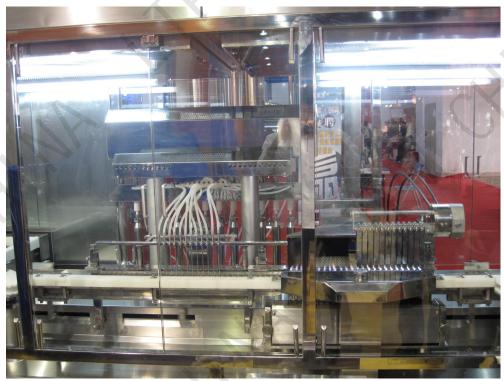
# Main technical parameters

Capacity	1-2ml: 35000-38000 ampoules/hour	
	3ml:32000-34000 ampoules/hour	
Ampoule size	1ml,2ml,3ml	
Filling Accuracy	2ml: ±1%	
Broken rate	≤0.1%	
Sealing finish rate	≥99.9%	
Power	8kw	
overall	4343*1710*2270mm	
Weight	3200kgs	

# **Photos**

# **Ampoule Filling and Sealing Machine**





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