### **GMP Washer**





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#### 2.Advanced cleaning system

- •Highly efficient and energy-saving circulating water pump:
- -Made of AISI316L.

-Casing and impeller undergo a polished treatment to achieve a smoothness of Ra≤0.6µm, effectively eliminating residual chemical substances.

- Equipped with a variable frequency startup control to prevent any impact on vessels and appliances during the pump's startup moment.

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#### Application

Our GMP washer is designed strictly in accordance with GMP standards, which provides a traceable cleaning process and standardized cleaning solution. It made with pharmaceutical-grade materials, ensuring a safer and cleaner production process.

It is mainly used for cleaning key components, such as fermentation tanks, large balloon bottles, large glass products, filling and packaging machine parts, mixers, funnels, pallets, boxes, table-ting tools and other items for the production of medicines, diagnostics, cosmetics and food.

#### Advantage

1.Siemens PLC control system with full color LCD touch screen

•Built-in multiple cleaning programs and customizable programs, capable of programming process cycles according to user requirements.

•Preventive maintenance and identification and resolution of faults, equipped with a built-in service diagnostic program, capable of systematically verifying and rechecking the operation of components.

•Reserve ERP/MES communication interface (LAN cable) to connect with the SCADA system, providing free communication protocols, IP addresses, point tables, and corresponding technical support to complete the SCADA data acquisition tasks,



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•The multi-channel chemical cleaning peristaltic pump can automatically distribute cleaning agents into the chambers according to programmed requirements. It is equipped with a low liquid level sensor to monitor for any liquid shortage.

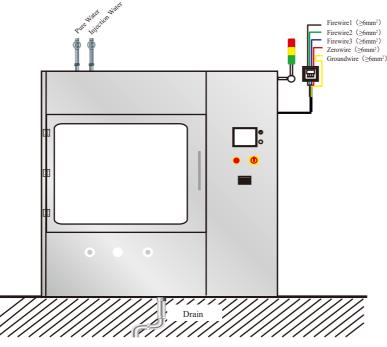
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•The cleaning basket rack is supplied with water using a single or dual water supply method. After each cycle, the water in the drainage pipeline is discharged.

•The circulation pipeline is equipped with a pressure monitoring system, and the screen displays the real-time water pressure of the cleaning spray. When the cleaning water pressure is abnormal, the operation of the circulation pump is temporarily paused.

•The spray arm speed sensor monitors the real-time rotation status of the spray arm. When the spray arm rotation is abnormal, the operation of the circulation pump is temporarily paused.

•The inner tank of the water tank is equipped with low liquid level and high liquid level alarm devices to ensure the supply of cleaning water.



3.Advanced drying system ensures thorough drying.

•Compressed air drying system, where dry air is injected into the vessel's interior through an injection-type cleaning basket rack.

•Equipped with AAF H14 air inlet HEPA filter.

#### 4.Safety protection system, fully ensuring the safety of operators.

•The door's sealing is achieved through compression, and the sealing effect can be ensured by monitoring the door's sealing gasket in real-time. This real-time monitoring can improve the sealing effectiveness of the door, preventing the leakage or entry of gases, liquids, dust, and other substances.

•Water overheating protection, hot air heating overheating protection, water pump overheating protection, fan overheating protection, etc.

• Coarse filtration system, water tank filtration system, circulation pump, drainage pump pipeline filtration protection, etc.

•Audible and visual alarm: Operation status indicator lights, located on the top of the machine, display the machine's operating status in real-time through green, yellow, and red colors. Alarms should be issued for equipment abnormalities and deviations. Automatic sound alarms can be implemented. Alarm information, including alarm codes, alarm time, and alarm release time, can be displayed on the screen.





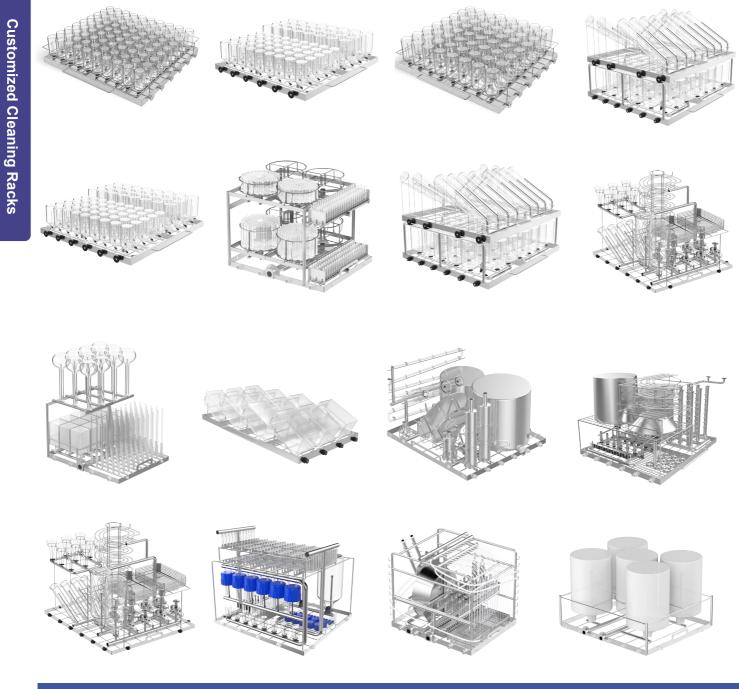
## Specification

Model		GMP-600	GMP-12	00 GMP-160	0		
Capacity(L)		688	1210	1690			
Control system		Siemens S7-1200					
Display		7 inch LCD Touch screen					
Standard Program		20					
Permission management system		Four level					
Storage		USB port					
Printer		Build in Printer					
Cleaning System	Cleaning Temp Range	RT to 93 <sup>°</sup> C					
	Cleaning method	Spray cleaning					
Cleaning Agent Addition Channel		Double channel					
Cleaning Agent Storage Capacity		5L*2units					
Advanced Function		Audit tracking					
		Spray arm speed s	ensor,				
		Pipeline pressure monitoring					
		Circulating pump variable frequency startup					
Drying System	Drying Mode	Hot air injection via	sprinkler b	y compressor fan			
	Drying Time Range	15 to 30 mins					
	Drying Temp Range	RT to 120 °C					
	Air volume	270M3/H	345M3/H	420M3/H			
Water inlet pipe	Quantity	2 units					
	Material	304 stainless steel					
Water Pump	Brand	World-renowned bra	and				
	Flow Rate	≥1000L/min					
Structure	Material	AISI316L stainless	steel				
	Door	Double-layered, hol	llow-temper	ed glass side-opening	g door with a stainless steel frame		
Power Supply		380V,50/60Hz					
Consumption		22kW		26kW			
Internal Size(W×D×H)(mm)		830x830x1000		1100x1100x1000	1300x1300x1000		
External Size(W×D×H)(mm)		1540x950x1990		1825x1220x1990	2050x1420x1990		
Shipping Size(W×D×H)(mm)		1700x1250x2240		2100x1550x2240	2350x1700x2240		
N.W./G.W. (kg)		650/730		800/900	950/1070		



## **Customized Cleaning Racks**

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Types of cleaning	External size(mm)	GMP-600(pcs)	GMP-1200(pcs)	GMP-1600(pcs)		
1L Blue cap bottle	Н:225 Ф:100	80	126	178		
10L Blue cap bottle	Н:415 Ф:230	9	16	20		
20L Blue cap bottle	Н:510 Ф:300	4	9	12		
10L Big standing bottle	Н:435 Ф:230	9	16	20		
15L Big standing bottle	Н:535 Ф:240	6	12	20		
20L Big standing bottle	Н:510 Ф:300	4	9	12		

Note: Our cleaning racks can be customized according to your cleaning needs.