

heavy-duty washer for pharmaceutical and food industries

heavy-duty washer set high-pressure rinsing, cleaning agent automatic addition, hot air drying, intelligent control, verification and traceability in one, widely used in pharmaceutical, food, medical, scientific research, petrochemical, electric power and other fields.

Heavy-Duty Washer

The heavy-duty washer is engineered for the thorough cleaning, disinfecting, and drying of large labware, stainless steel components, mixing containers, pipes, hoses, animal cages, and more. It meets GMP and other high-standard requirements for pharmaceutical, food, laboratory, animal facilities, chemical, and environmental industries.

High-Efficiency Cleaning System

1. Imported high-flow circulating pump (double-pump optional) delivers high-pressure, high-flow hydraulic impact.
2. Multi-layer independent water supply cleaning rack, top and bottom rotating spray arm for all-round coverage.
3. Built-in peristaltic pump for precise dosing of cleaning/neutralizing agents, enabling chemical decontamination and automation.



4. Supports tap, pure, and injection water sources for GMP-compliant cleaning.

Intelligent Drying & Cooling

1. Drying unit includes circulating blower, heating element, and HEPA filter for efficient hot air drying.
2. Special spray column directs hot air to inner cavity and surfaces for faster drying.
3. Rapid cooling system ensures safety and accessibility post-drying.
4. HEPA filtration keeps drying air clean, preventing secondary contamination.

Structural Design

1. 316L stainless steel cleaning cavity with rounded internal structure to eliminate dead corners.
2. All water-contact parts made of stainless steel and PTFE for corrosion resistance.
3. Optional internal lighting for visual inspection.
4. Hollow double-layer tempered glass door for insulation and noise reduction; automatic lift and manual switch options available.
5. Silicon rubber seal, pressed by independent stamping for air and water tightness.
6. Optional transfer cart for easy basket handling.

Operation Principle

1. Combines high-pressure hydraulic rinsing, chemical washing, and high-temperature hot air drying.
2. Mechanical cleaning: High-pressure water from pump to spray arms/racks for effective dirt removal.
3. Chemical cleaning: Precise delivery of cleaning/neutralizing solutions to dissolve residues.
4. Thermal effect: Controlled water/air temperature accelerates pollutant removal and drying.
5. Intelligent PLC program for process control, recording, and traceability.

Control & Interactive System

1. Reliable Siemens PLC controller.
2. Touch screen (7"/10" optional), bilingual interface, simple parameter/process management.
3. Up to 20 program groups (10 standard, 10 user-defined).
4. Supports power failure recovery, program jump, and component status control.

Safety Mechanism

1. Emergency stop, anti-pinch detection, automatic door lock, waterproof backflow protection.
2. Separated power distribution box for electrical safety.
3. Real-time alarm for faults (low liquid, overflow, pump overheating, abnormal water intake, etc.).

Audit Tracking & Verification

1. Three-level authority management and operation logging.
2. Automatic cleaning record export (PDF).
3. Logs include operator, time, equipment, program, data, and abnormal info.
4. Supports DQ, IQ, OQ, FAT, SAT verification documentation.
5. Compatible with TOC, conductivity, and cleaning verification tests.

Wide Range of Applications

1. **Pharmaceutical Industry:** Filling line parts, tablet molds, drums, tanks, filter housings, etc.
2. **Food Processing:** Barrels, crates, piping, and more.
3. **Scientific Research:** Large glassware, containers, high-use items.
4. **Animal Facilities:** Cages, water bottles, feed boxes.
5. **Chemical, Power, Environmental:** Safe cleaning of hazardous-contact appliances.

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| Model | GW90-400 | GW90-760 | GW90-1000 | GW90-1800 |
|-------------------------|--|-------------------------|-------------------------|-------------------------|
| External dimension | 1110Wx900Dx2165H mm | 1800Wx1000Dx2250H mm | 2000Wx1190Dx2250H mm | 2500Wx1540Dx2250H mm |
| Inner cavity volume | 400L | 760L | 1000L | 1800L |
| Control system | PLC/Siemens brand, or the same quality brand | | | |
| Display | 7" touch screen | 10", touch screen | | |
| Door structure | single door, double door, optional | | | |
| Door opening method | Electric door opening, customization | | | |
| Circulating pump flow A | 1000L per minute | 800L per minute | 1000L per minute | 1000L per minute |
| Circulating pump flow B | - | 800L per minute | 1000L per minute | 1500L per minute |
| Cleaning temperature | ambient temperature to 93°C | | | |
| Water heating power | 15kw | 18kw | | 24kw |

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| Model | GW90-400 | GW90-760 | GW90-1000 | GW90-1800 |
|---------------------------|------------------------------|-----------------|------------------|------------------|
| Drying temperature | ambient temperature to 120°C | | | |
| Drying heating power (KW) | 3.6kw | 6kw | 11.25kw | 15kw |
| Voltage | 380Vac, 50Hz | | | |