



GENEVA SCIENTIFIC

LAB EQUIPMENT SOLUTIONS

LABORATORY GLASSWARE WASHER - LAB 500 CL



*Shown above with optional glass door

Model	LAB 500 CL
Exterior Dimensions (WxDxH)	23.62" x 24.8" x 33.46"
Chamber Dimensions (WxDxH)	21.85" x 19.68" x 26.38"
Sound Level	56.2 dB
Water Consumption	3.1 gal per chamber fill
Electrical	208V/60Hz 480V/60Hz

The LAB 500 CL is an under counter washer disinfectant designed to handle a wide range of laboratory glassware granting an automatic washing, thermosinfection and forced hot air drying treatment.

The electronic programmable microprocessor is capable of storing up to 40 washing programs: 20 standard pre-programmed cycles and 20 additional adjustable and password protected so the customer can configure specialized programs for their independent needs. The user can customize any parameter needed to a cycle.

This unit has 2 separate washing and drying injection connections allowing the use of dedicated upper and lower washing carts.

The upper level has telescopic bearing rails enabling the use of specific upper wash carts. The drop-down door provides a loading platform for lower and dual injection wash carts for a convenient loading and unloading job.

Other features include:

- Injection cleaning: 2 connections, upper, lower and dual injection wash carts available
- Dosing: automatic chemical dosing via peristaltic pumps
- Drying: Forced hot air drying system: in the chamber, through the chamber washing arms and through the wash carts injection system/washing arms

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STANDARD FEATURES

Hinged Drop Down Door

- *Counterbalanced for ease of operation, stainless steel AISI 316L (DIN 1.4404) washing chamber side, stainless steel AISI 304 external side
- *The door acts as a loading platform for lower and dual injection wash carts for a convenient loading and unloading job
- *Fully insulated to reduce heat loss and noise

Fully Extendable Load Bearing Arms

- *The upper level has fully extendable telescopic bearing rails enabling the use of specific upper washing carts

Washing System

- *Two rotary spray arms, one on the bottom and one on the top of the chamber
- *Up to three more washing arms in the available wash carts
- *Spray arms made of AISI 316L stainless steel (DIN 1.4404)
- *Easily disassemble washing arms for cleaning and maintenance

Forced Hot Air Drying System

- *Air circulation in the chamber, through the chamber washing arms and through the wash carts injection system and washing arms
- *F5 (EN 779) pre-filter
- *1.4 kW heating elements provide up to 140°C (184°F) air
- *Dryer blower flow rate up to 150 m³/h (5,297 ft³/h)

Direct Injection System

- *2 wash chamber connections for upper, lower and dual injection wash carts

Circulation Pump

- *1 unit 118.87 gal/min pump
- *Pump power 550W

Filter System

- *A three stage filtration system helps protect recirculation and drain pumps from debris
- *Filters can be easily removed for cleaning

Steam Condenser

- *Prevent vapors from entering into the washing area at a set temperature programmable from 0°C - 93°C (32°F - 200°F)

Chemical Dosing

- *Two peristaltic pumps provide precise addition of liquid chemical agents
- *Vacuum switch for checking chemical presence

Electric Heater

- *5.1 kW electric heating elements providing heating up to 93°C (200°F)
- *Electronic Thermostat
- *Two independent PT1000 temperature probes

Microprocessor Control System

- *Possibility of up to 40 storable programs, 20 standard programs, 20 user definable programs

System Control Panel

- *Digit pressure function buttons
- *32 character monochrome LED display

System Monitoring

- *Audible and visual alarms provide quality control for each wash cycle
- *Water level sensor for water sump load
- *Additional water level sensor to prevent wash chamber overflow
- *RS 232 port for printer connection to monitor and validate washing cycle
- *USB port for historical cycle data, machine parameters and washing programs download. Allows easy software upgrades.

Drain Pump

- *Independently operated drain pump for efficiently pumping out waste water

SAFETY FEATURES

Locking Door

- *Prevents interference with wash cycle once the machine is in operation.

Drop Down Door

- *Eliminates the safety hazard associated with guillotine type doors
- *Counterbalanced for safe operation

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PROGRAMMING AND CYCLE OPERATION

*The user is able to create unique programs to meet their specific needs. Listed are various phases that can be programmed and repeated into various combinations.

- **Pre-Wash** - The user is able to define the number of pre-washes, length of pre-washes and select between cold, hot and DI water or mix two sources.

- **Wash** - The user is able to define the length of the wash cycle, detergent dosing and dosing temperature, temperature of the water (up to 200°F/93°C) and select between cold, hot and DI water or mix two sources.

- **Chamber Flush During Drain** - The user is able to define flush time execution during the draining.

- **Neutralization** - The user is able to select the length of the rinse, the presence and the amount of neutralizer, temperature of the rinse (up to 200°F/93°C) and what type of water is to be used, either cold hot or DI water or two mixed sources.

- **DI Rinse** - The user can define the length of the DI rinse, temperature of the water (up to 200°F/93°C) presence and amount of rinse aid.

- **Drying** - Programmable between low speed and high speed drying and up to a temperature of 140°C (284°F). Operation time of the steam condenser.

CONSTRUCTION

Wash Chamber and Door Internal Side

*Constructed using AISI 316L BA Ra<30 µin finish

*Designed and constructed with smooth edges and corners removing areas where dirt can accumulate and allow bacterial growth

Exterior

*AISI 304 stainless steel Scotch Brite finish Ra<40 µin

Components

*Constructed using stainless steel and other materials which are resistant against the effects of aggressive detergents

Insulation

*High performance melamine insulation guards against heat loss and reduces noise level

OPTIONAL FEATURES

***DI Booster Pump** - Provides proper water pressure for demineralized water supply

***Printer** - For validating washing phases with detailed information. External printer can be integrated on the front panel of an accessory side cabinet.

***Water Softener** - Softens incoming hot and cold water. Programmable regeneration with low salt alarm.

***Drain Cooling Solenoid Valve** - Waste water is cooled to 60°C (140°F)

***Seismic Tie Down** - Anchors washer to floor

***Additional Dosing Pump** - One additional peristaltic pump for dosing an additional type of chemical to meet specific wash requirements

***Flow Meters** - Flow meters for additional chemical control

***Conductivity Sensor** - Accurate measuring of the conductivity value during the final rinse

***Boiler to Pre-Heat DI Water** - 4.7 gal capacity. Pre-heats DI water to a programmed temperature 0-93°C (32-200°F). Requires 23.62" height stand or fully dedicated side cabinet. Machine is built as a single 35.43" wide unit.

***Extra Power 8kW** - Total machine power raised up to 8kW to shorten cycle times through reduced heating time in the wash chamber

***HEPA Filtration** - HEPA H14 filter with global efficiency M.P.P.S. 99.995% (EN 1822)

***Network Connection** - Ethernet connection by X-fire device

***Validation Support Documentation and Services**

***Cleaning Chemicals**



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