Product specification

Getinge Lancer Ultima model 810 LX

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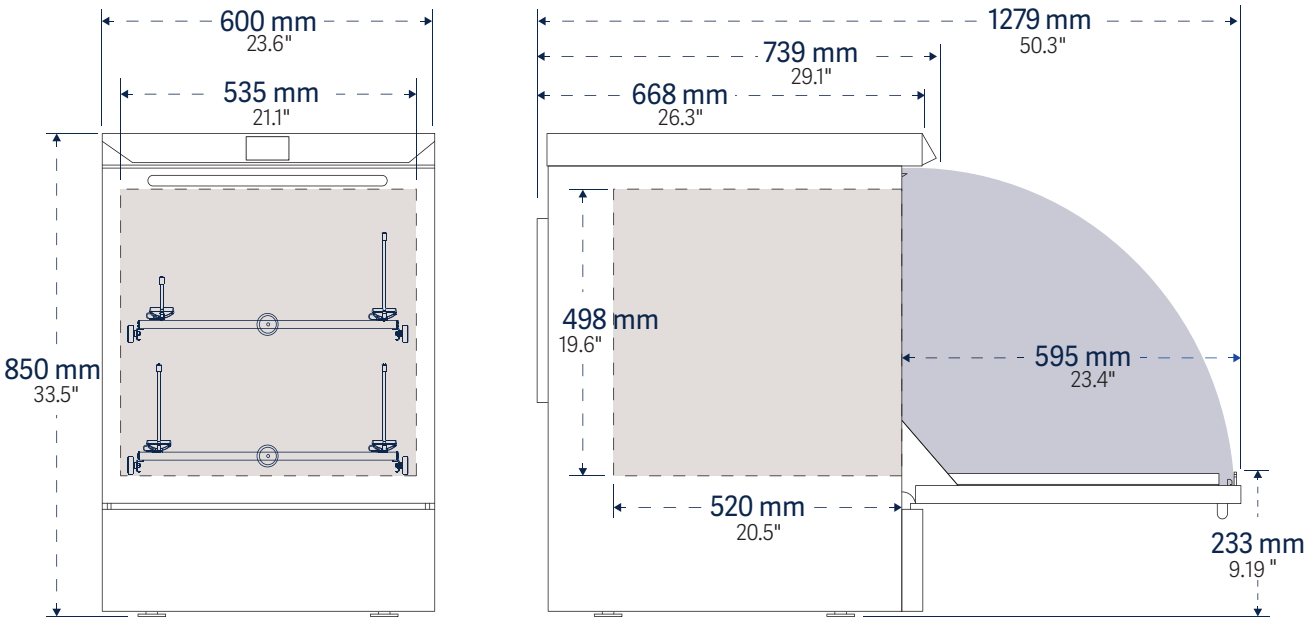
Product specification

Basic specifications

Drawings display front and side of unit with door swing allowance.



- **Door configuration**
  Fold-down door is made of solid 316L stainless steel. Optional View-In-Process (VIP) window provides a view inside the chamber.
- **Water per fill**
  12 L (3.1 gal)
- **Interior dimensions**
  (w × h × d)
  535 × 498 × 520 mm
  (21.1" × 19.6" × 20.5")
- **Exterior dimensions**
  (w × h × d)
  600 × 850 × 739 mm
  (23.6" × 33.5" × 29.1")
- **Exterior dimensions with optional base cabinet** (w × h × d)
  600 × 1340 × 739 mm
  (23.6" × 52.8" × 29.1")
- **Wash programs**
  5 presets, 35 custom settings
- **Cycle functions**
  Wash temp: 95°C / 203°F
- **Weight**
  85 kg (187 lb.)
- **Effective chamber volume**
  140 L (4.9 cu.ft.)
- **Load/machine foot**
  0.3 kN

Lancer model 810 LX undercounter labware washer; shown with optional View-In-Process (VIP) window.

General specifications

The Getinge Lancer Ultima series model 810 LX washer has been designed to meet and exceed the growing requirements of the laboratory industry for cleaning of glassware. Getinge Lancer Ultima series washers offer the best labware cleaning solutions in the industry, delivering high performance in a compact footprint. Efficient use of water, detergents, and rinsing agents minimizes the environmental impact while energy saving construction lowers total cost of ownership.

Inventory systems are evaluated and designed to solve specific cleaning challenges. The exclusive Prolux programmable microprocessor controller commands a full range of prewash, wash and rinse functions through simple touchscreen menus. The model 810 LX undercounter labware washer offers the convenience of five preset programs for light to heavy loads, while up to 35 more complex programs can be customized as needed to meet specific operational requirements.

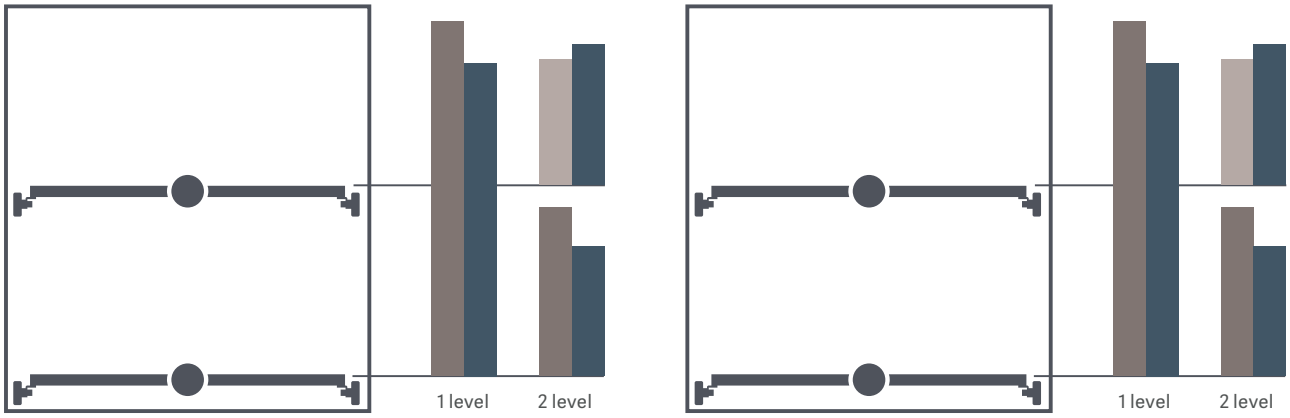
Features and benefits

The ULTIMA series model 810 LX undercounter labware washer includes a suite of features and benefits designed for performance and operator safety.

- The Chamber design and it's continuous gasket improves cleaning ability
- 498 mm high chamber, sanitary 316L, chamber walls and sump made of stainless steel to withstand the powerful washing process and aggressive chemicals often required for thorough cleaning.
- Insulated, double-wall construction for thermal and sound protection.
- Unique, proven design enables water circulation at full pressure on all levels, delivering the required mechanical effect for highly efficient washing in all areas of the load.
- User friendly 3.5" color touchscreen provides comprehensible help in resolving problems and allows operators to see machine status from a distance.
- 40 microprocessor controlled programs, of which five are factory preset and 35 can be user-customized (PIN code protected) to suit particular applications or loads.
- PLC microprocessor designed for simplicity, one-touch start and real-time status indicators.
- USB port in front of panel.
- Gaskets and seals in contact with the process water are food grade quality.
- Low chemical level detectors and alarms.

Cleaning performance and safety

Loading configurations



PST Basic basket
PSBT Basic basket with spray arm
IXC / IXL injection racks (long / short jets)

Ergonomics

Ergonomic loading configurations

- Telescoping load-bearing rails permit extension of racks for easy loading.
- All racks are interchangeable between top and bottom wash levels, and among underbench models and freestanding Getinge Lancer Ultima series models 910 LX, 1300 LX.
- The fold-down door creates a platform for proper rack positioning and more comfortable loading and unloading.

Controller

The Prolux controller is based on a high performance PLC microprocessor designed for simplicity, one-touch start, real-time status indicators and intuitive programming options that permit customization over the range of washer operations. Prolux integrates a suite of menu screens that support digital functions from cycle selection, process monitoring, warning advisories, audible and visual alarms and system communications and data capture.

Programs

The washer is pre-loaded with wash cycles that are generic from the factory that can be modified and adapted at Performance Qualification. Below are the phases that are applicable in the program group which allow modification of parameters like; water to be used, temperature, phase time, dosing amount etc.

- **1-Prewash:** Select number of prewashes (0 to 3), duration of prewash (up to 30 minutes), temperature of water (up to 95°C / 203°F) and detergent dosing time. User can select cold or DI water.
- **2-Wash:** Select duration of wash (up to 30 minutes), detergent dosing time and temperature of water (up to 95°C / 203°F). User can select cold or DI water.
- **3-Running Water Rinse A:** Select number of rinses (0-9), duration of rinse (up to 30 minutes) and temperature of water (up to 95°C / 203°F). User can select cold or DI water.
- **4-Acid Rinse:** Select duration of rinse (up to 30 minutes), acid dosing time and temperature of water (up to 95°C / 203°F). User can select cold or DI water.
- **5-Running Water Rinse B:** Select number of rinses (0-9), duration of rinse (up to 30 minutes) and temperature of water (up to 95°C / 203°F). User can select cold or DI water.
- **6-DI Rinse:** Up to 4, duration of rinse (up to 30 minutes), temperature of water (up to 95°C / 203°F). User can select cold or DI water.
- **7-Final Rinse:** Duration of rinse (up to 30 minutes), temperature of water (up to 95°C / 203°F). If conductivity monitoring is desired, that procedure is made in this phase.

Parameters – Different parameters can be set for each program via control system such as:

- Number of phases for the program (prewash, wash, neutralizing rinse)
- Duration for each phase
- Water inlet selection for each phase
- Temperature for prewash, wash, acid rinse, DI rinse and final rinse.
- Selection of additive intake

A Prolux microprocessor with adjustable programs ensures the model 810 LX washer control. Up to 40 standard washing programs of which five are factory preset (for chemistry glassware, volumetric flasks, bacteriology / virology glassware and one additional ECO program)* while others (35) are user-customized. The microprocessor controls all system functions and monitors system operations. Both visual and audible alarms inform operator in case of cycle malfunctions and visual information on real-time process can be displayed.

* more information to be found in the user manuals.

Getinge Lancer Ultima model 810 LX
Ordering information

Make your selections:

[•] = Standard selection ◯ = Optional selection

Documentation

To ensure the correct sets of manuals to be included for model 810 LX:

User manuals are available for all EU languages. Installation manuals, service/technical manual, and the spare parts list are all available in English or French only.

(Manuals are provided electronically on USB device).

Please indicate your requested language for the user manual:

_ _ _ _ _ _ _ _ _ _ _ _ _ _ _

Please check your requested language for installation, service and spare part manual:

☐ English

☐ French

A copy of the user manual can be provided as an option.

◉ No paper copy of user manual

◯ One paper copy of user manual (47020134)

Documentation commissioning

IQ/OQ documentation and FAT protocol
The model 810 LX can be tested as per a standard FAT protocol.

◉ No FAT protocol.

◯ Standard FAT protocol without customer (01060194).

◯ Customer attendance at FAT – 1 day standard FAT protocol. No washing test performed (AA90010668) – Attendance of maximum 2 individuals.

As an option, the washer can be tested as per a standard FAT protocol. The prequalification protocol is performed at the manufacturing facility prior to shipment in accordance with Getinge product protocol.

The prequalification protocol consists of a number of test plans and test result tables.

IQ/OQ documentation and SAT protocol
The model 810 LX washer can be tested as per a standard SAT protocol.

SAT protocol can be provided on customer's site, contact Getinge for information.

Performance qualification (by others)
The performance qualification must be performed by others.

Language/HMI

The panel/HMI includes a multilingual pack. Select your language to be displayed on the HMI:

- ◯ Bulgarian
- ◯ Croatian
- ◯ Czech
- ◯ Danish
- ◯ Dutch
- ◯ English
- ◯ Estonian
- ◯ Finnish
- ◯ French
- ◯ German
- ◯ Greek
- ◯ Hungarian
- ◯ Irish
- ◯ Italian
- ◯ Latvian
- ◯ Lithuanian
- ◯ Maltish
- ◯ Norwegian
- ◯ Polish
- ◯ Portuguese
- ◯ Romanian
- ◯ Russian
- ◯ Serbian
- ◯ Slovakian
- ◯ Slovenian
- ◯ Spanish
- ◯ Swedish
- ◯ Turkish

Contact your Getinge representative for another language.

Panel

The model 810 LX comes as standard with a 3.5" color touchscreen display.

Program selection

Five factory laboratory programs as standard, with 35 user-customized programs available.

Framework

Quality AISI 304 stainless steel framework as standard.

Door selection

The fold-down door is made of solid 316L stainless steel (only for parts in contact with process water).

As an option, **View-In-Process (VIP) window** provides a view inside the chamber. With this option, the wash chamber is equipped with one LED lamp mounted through the ceiling to illuminate the chamber for safe operation.

- ◉ Standard door - Stainless steel door
- ◯ VIP window and illuminated chamber (90010653)

Heating

The wash process cycle is heated electrically via elements within the chamber sump.

Voltage Supply

50 Hertz

- ◯ 200-208 VAC, 3+PE (90010002)
- ◯ 220-240 VAC, 3+PE (90010101)
- ◯ 380-400 VAC, 3N+PE (90010102)
- ◯ 220-240 VAC, 1+PE (AA90010680)

60 Hertz

- ◯ 200-208 VAC, 3+PE (90010075)
- ◯ 220-240 VAC, 3+PE (90010026)
- ◯ 200-208 VAC, 1+PE (90010017)
- ◯ 220-240 VAC, 1+PE (90010025)

Water Connections

Two (2) water inlets allow different types of water to be used for washing and rinsing, typically selected from:

- **Cold water**
- **DI water**

- ◉ Standard valve
- ◯ As an option, low pressure valve + pump kit provides dequate water pressure for DI water supply (01060206).

Connections are threaded type (see tables for sizes and consumption).
The water hoses (connection to the washer) are supplied with the machine.

Steam Condenser

The condenser removes steam vapor when chamber temperature exceeds 50°C / 122°F and directs condensate to drain

- ◉ No steam condenser
- ◯ Steam condenser (90020003)

Dosing pumps

The model 810 LX is always equipped with two peristaltic pumps (tolerance of ± 15 % of volume) for alkaline and acid.

Level sensors

Low level sensor will automatically send a low chemical warning to the message screen to alert operators when the chemical reaches the low level in the container. Controller allows the new cycle to be started, but requires the detergent / acid to be replaced or refilled before another cycle.

Chemical containers are fitted with level sensors to prevent pumping in the absence of liquid. A visual and audible alarm warns in case of lack of chemicals.

- (●) Level sensors for European containers dimensions
- (○) Level sensors for US/Canadian containers dimensions

Effluent neutralization

Neutralization of the effluent can be performed by adding acid in the caustic wash solution just before draining. The quantity of acid to be injected has to be calculated to ensure the amount of detergent in the wash solution is properly neutralized. It is also possible to neutralize an acid rinse with the same method.

- (●) No effluent neutralization
- (○) Effluent neutralization (90010326)

Draining

Vertical standpipe; 40 mm (1½") diameter; 500 to 700 mm (20" to 27") above floor (see page 12 for more information).

Drain cooling

Effluents are cooled down to reduce temperature to an average of 60°C / 140°F by direct injection of cooling water.

- (●) No drain discharge cooldown
- (○) Drain discharge cooldown (90010077)

Printer

To ensure cycle documentation, information can be printed on an external table printer. The printout gives documented evidence of the cleaning process including cycle parameters, operator number, time of program start, phase duration, probe temperature during each phase, detergent and acid intake.

- (●) No printer
- (○) External table printer with thermic paper. External printer is delivered with a cable connected on the RS plug located on rear panel of machine. (90020001)

Prerequisite: the option selection RS-232 / Ethernet outputs needs to be selected.

RS-232 / Ethernet outputs

Serial port for batch report through USB.
The RS plug is located on rear panel of washer.

Multiple data ports include ethernet and RS-232 connectors.

- (●) Without extension and attachment so that the RS-232 / Ethernet ports are located on the backside of the LAB washer.
- (○) With extension and attachment so that the RS-232 / Ethernet ports are located on the backside of the LAB washer (AA90010676)

Network printer

The model 810 LX is also equipped with network printer capabilities.

- [x] No network printer
- [ ] Connection for network printer HP (90010633)
- [ ] Connection for network printer Brother (90010634)

Prerequisite: the option selection RS-232 / Ethernet outputs needs to be selected.

Stainless steel column in AISI 316L

- [x] Without stainless steel water circulation system (hydraulic circuit) in AISI 316L.
- [ ] The water circulation system (hydraulic circuit) can be provided in 316L stainless steel.

  This does not include the main water circulation pump that is made in polyamide (thermoplastic) (AA90010671).

Control and validation

Chamber temperature probe

The model 810 LX is equipped with a PT-1000 temperature probe.

- [x] No calibration report
- [ ] With calibration report (90010590)

Flowmeters

Detergent and acid flow rate are individually fitted with a flowmeter. The device will print out the flow of each line.

If the value is lower or higher than the set value an alarm will be raised and the machine will stop the process.

- [x] No flowmeters
- [ ] With flowmeters (AA90010672)

Pump pressure

The recirculation pump pressure will be measured thanks a pressure sensor, this value will be printed out.

If the value is lower or higher than the set value an alarm will be raised and the machine will stop the process.

- [x] No pump pressure monitoring
- [ ] With pump pressure monitoring (AA90010675)

Conductivity check

Checks the quality of the wash process by measuring the conductivity of the final rinse water. The obtained value is printed out.

If the value is higher than the set value an alarm will be raised and the machine will stop the process.

Printer option is recommended.

- [x] No conductivity check
- [ ] With conductivity check (AA90010673)

Accessories

Getinge Lancer Ultima kit for Labexia range racks
If you are in possession of LABEXIA range racks, they can be used in new models of the Getinge Lancer Ultima series.

A wheels adapter kit is nevertheless necessary so your racks are completely interchangeable and can be used indifferently in the both ranges of washers LABEXIA/ Getinge Lancer Ultima without another manipulation.

- ◉ No Getinge Lancer Ultima kit for accessories
- ○ Getinge Lancer Ultima kit for accessories (70270240) Quantity :

Base cabinet
The base cabinet provides ergonomic loading/unloading. It raises the loading level of the model 810 LX at 750 mm (29.52") and allows storage of two x 10 L (2.5 gallons) chemical containers with maximum dimensions H 320 × W 230 × D 200 mm (12.6" × 9" × 7.9") or rack accessories under the chamber.

Fixed standpipe and plumbing trap. Height above floor: from 1000 mm (39.86") to 1200 mm (47.24").
See page 12 for more information.

- ◉ No base cabinet
- ○ Base cabinet (90010196)

Side chemical cabinet
Side chemical cabinet placed on right hand side of the washer that allows storage of two 10 L (2,5 gallons) chemical containers. With the side chemical cabinet the washer will have a width of 900 mm (35,4"). The installation of the side chemical cabinet is to be made at the installation of the washer (4x screws)

- ◉ No side chemical cabinet
- ○ Side chemical cabinet (AA02010104)

Note, base cabinet cannot be combined with the side chemical cabinet..

After market options

- ○ A low pressure valve + pump kit for DI water can be added at a later stage - 50 Hertz washer (70040075)
- ○ A low pressure valve + pump kit for DI water can be added at a later stage - 60 Hertz washer (70040084)
- ○ An external Impact thermal printer for cycle batch reports and cable can be added at a later stage (AA70010983).
- ○ A conductivity kit can be added at a later stage (AA70050005).
- ○ Pump pressure monitoring kit can be added at a later stage (AA70050003).
- ○ Pump pressure monitoring kit for stainless steel column can be added at a later stage (AA70050004).

Preventive maintenance

Annual preventive maintenance agreements ensure optimum washer performance and extend equipment life. Contact us for details.

Utility Requirements

Utility	Characteristic	Connection	Consumption
Water • cold • DI	Pressure: 200 to 600 kPa / 29 to 87 psi Flow: 20 L/min (5.25 gpm) Temperature: Ambient up to 25°C (77°F) If drain discharge cooldown option selected: cold water should be < 25°C (< 77°F)	Male threaded: 20 /27 (¾")	12 L (3.1 gal) (for each filling or draining phase)
Electricity	Voltage: request Frequency: 50/60 Hz	Cable (50 Hz) No cable (60 Hz)	See Electrical Table
Vapor exhaust	Atmospheric Exhaust Hood located 300 mm, (12") to 1000 mm (40") above exhaust pipe		60 m³/h (50 Hz)
Drain	Fixed standpipe and plumbing trap Height above floor: from 500 mm (20") to 700 mm (27½")	Inner Diameter: 40 mm (1½")	Required to handle 40 L/min (10.5 gpm) max temp 95°C (203°F)
Drain condenser (if option selected)	Fixed standpipe and plumbing trap Height above floor: < 400 mm (15.7")	Inner Diameter: 40 mm (1½")	Required to handle 40 L/min (10.5 gpm) max temp 95°C (203°F)
Drain (if option selected) • Base cabinet	Fixed standpipe and plumbing trap Height above floor: from 1000 mm (39.9") to 1200 mm (47.2")	Inner Diameter: 40 mm (1½")	Required to handle 40 L/min (10.5 gpm) max temp 95°C (203°F)
Drain condenser with Base cabinet (if options selected)	Fixed standpipe and plumbing trap Height above floor: < 850 mm (33.5")	Inner Diameter: 40 mm (1½")	Required to handle 40 L/min (10.5 gpm) max temp 95°C (203°F)

Electrical

Voltage and frequency	kW	Full load amps (A / phase)	Amps protection (A)
200–208 VAC, 3+PE 50 Hz	7	21	25
200–208 VAC, 3+PE 60 Hz	7	20	25
200–208 VAC, 1+PE 60 Hz	7	34	40
220–240 VAC, 3+PE 50 Hz	7	18	20
220–240 VAC, 3+PE 60 Hz	7	18	20
220–240 VAC, 1+PE 50 Hz	7	31	40
220–240 VAC, 1+PE 60 Hz	7	31	35
380–400 VAC, 3N+PE 50 Hz	7	11	16

Operating conditions

Room temperature	5–35°C (41–95°F)
Air humidity	Max 80 % vid 31°C (88°F)
Max surface temperature	50°C (123°F)
Water consumption	12 L/phase (3.17 gal/phase) (Varies with the load)
Ingress protection	IP21
Heat dissipation	2380 Btu/h, 600 kcal/h
Noise level	≤ 60 dB(A) (According to Machinery Directive 2006/42/EC, on 1 m distance, 1.6 m above the floor, combined propagation in free fields on hard surface).

Technical data components

Water circulation system

Design pressure	Max 600 kPa (87 psi)
Operating pressure	200 kPa (29 psi)
Design temperature	120°C (248°F)
Operating temperature	Max 95°C (203°F)

Circulation pump

Max flow	350 L/min (92 gpm)
Motor	0.9 kW
Material construction	Thermoplastic polyamide

Drain pump

Max flow	15 L/min (4 gpm)
Motor	45 W
Material construction	PP

Product circulation system

Flow, peristaltic pump	50 Hz: (detergent) 232 mL/min (acid) 207 mL/min 60 Hz: (detergent) 0.0739 gpm (acid) 0.0547 gpm

Heater electrical

Heating velocity	3.5–4°C/min (38–39°F/min) (dependent on voltage)
Installed power	400 V: 6 kW, 230 V: 6 kW

Notes

GETINGE

Getinge is a global provider of innovative solutions for Life Science companies and institutions, operating rooms, intensive care units and sterilization departments. Based on our firsthand experience and close partnerships with Life Science companies, clinical experts, healthcare professionals and medtech specialists, we are improving everyday life for people – today and tomorrow.

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