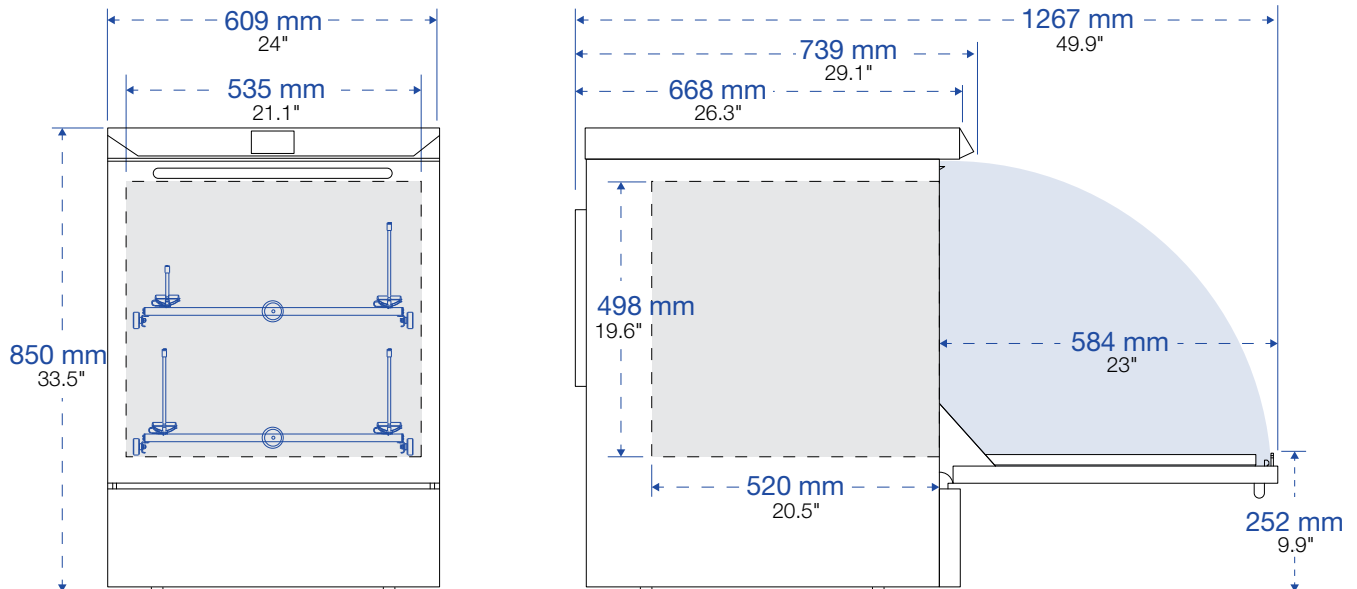


ULTIMA series model 815 LX

undercounter laboratory washer/dryer

LANCER
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SPECIFICATIONS



Base Model ULTIMA series 815 LX

• Door Configuration

Fold-down door is made of solid 304L 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 x h x d)

535 x 498 x 520 mm
(21.1" x 19.6" x 20.5")

• Exterior Dimensions (w x h x d)

609 x 850 x 739 mm
(24" x 33.5" x 29.1")

• Exterior Dimensions with Optional Base Cabinet (w x h x d)

609 x 1340 x 739 mm
(24" x 52.8" x 29.1")

• Wash Programs

4 Presets, 36 Custom Settings

• Cycle Functions

Wash Temp: 95°C / 203°F
Drying: Forced-air Chamber

• Weight

85 kg (187 lb.)

• Effective Chamber Volume

140 L (4.9 cu.ft.)

• Load/Machine Foot

0.3 kN



Lancer model 815 LX undercounter labware washer; shown with optional View-In-Process (VIP) window.

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

General Specifications

The ULTIMA series model 815 LX washer/dryer has been designed to meet and exceed the growing requirements of the laboratory industry for cleaning of glassware. 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 and drying challenges. The exclusive Prolux programmable microprocessor controller commands a full range of prewash, wash, rinse and drying functions through simple touchscreen menus. The model 815 LX undercounter labware washer offers the convenience of four preset programs for light to heavy loads, while up to 36 more complex programs can be customized as needed to meet specific operational requirements.

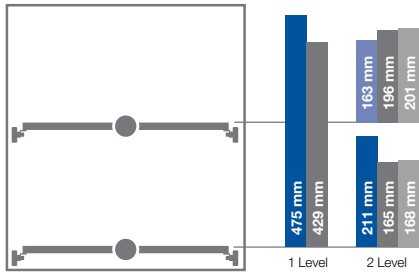
Features and Benefits

The ULTIMA series model 815 LX undercounter labware washer/dryer includes a suite of features and benefits designed for performance and operator safety.

- 498 mm high chamber, sanitary 304L, 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 four are factory preset and 36 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.
- Hot air is delivered through one blower for effective drying of glassware. It can be disabled by programming in the case of volumetric glassware.

Cleaning Performance and Safety

Loading Configurations



- PST Basic basket
- PSBT Basic basket with spray arm
- IXL Injection rack (long jets)
- IXC Injection rack (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 ULTIMA series freestanding models 910 LX, 1300 LX and 1800 LXA.
- 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.

8-Drying: Duration of drying (25 minutes at ~ 100°C / 212°F)*

9-Cooling: Duration of 5 minutes if the final rinse phase has been selected.

**Up to 85°C / 185°F on 120V models.*

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 815 LX washer control. Up to 40 standard washing programs of which four are factory preset (for chemistry glassware, volumetric flasks, bacteriology / virology glassware and stubborn stains) while others (36) 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.

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ORDERING INFORMATION

Make your selections:

= Standard selection

= Optional selection

Documentation

To ensure the correct sets of manuals to be included for model 815 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.

Please indicate your requested language for the user manual:

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

English

French

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

No extra paper copy of user manual

One extra paper copy of user manual (47020134)

Documentation Commissioning

IQ/OQ Documentation and FAT Protocol

The model 815 LX can be tested as per a standard FAT protocol.

No FAT for ULTIMA series washers

FAT for ULTIMA series washers:
IQ/OQ protocol provided (01060194)

If the 815 LX is equipped with a PRO KIT, as an option, the washer can be tested as per a standard FAT protocol including PRO KIT test protocol. The prequalification protocol is performed at the manufacturing facility prior to shipment in accordance with Lancer product protocol.

The prequalification protocol consists of a number of test plans and test result tables. 100% of the components are tested during the FAT.

IQ/OQ Documentation and SAT Protocol

The model 815 LX washer/dryer can be tested as per a standard SAT protocol.

SAT protocol can be provided on customer's site, contact Lancer 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:

- Danish English French Italian Spanish
 Dutch Finnish German Portuguese Swedish
 Other Language:
-

Panel

The model 815 LX comes as standard with a 3.5" color touchscreen display.

Program Selection

Four factory laboratory programs as standard, with 36 user-customized programs available.

Framework

Quality AISI 304 stainless steel framework as standard.

Door Selection

The fold-down door is made of solid 304L stainless steel
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

Heating

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

Temperature Probe

The model 815 LX is equipped with a Pt-1000 temperature probe.

Voltage Supply

50 Hertz

- 200-208 VAC, 3+PE
- 220-240 VAC, 3+PE
- 380-400 VAC, 3N+PE
- 220-240 VAC, 1+PE

60 Hertz

- 200-208 VAC, 3+PE
- 220-240 VAC, 3+PE
- 200-208 VAC, 1+PE
- 220-240 VAC, 1+PE
- 120 VAC, 1+PE , 2.4 KW or 2 KW (adaptable on site)

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 adequate water pressure for DI water supply.

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

Customer Water Loop

The washer/dryer can communicate with the customer water loop according to the following options.

No water loop

The device water loop can not be combined with the other device describe for DI water in the water connections.

Customer water loop control by relay (90010531)

As an option, the washer/dryer is equipped with a dry contact which opens and closes the customer's water loop valve (no valve on the washer/dryer). The model 815 LX is equipped with a stainless steel inlet tube (clamp fitting diameter 25 mm (1")). Customer has to provide the hose between the loop valve and the washer tri-clamp fitting.

Water loop control by valve (90010533)

As an option, the model 815 LX is equipped with a 316L stainless steel sanitary valve (in lieu of a plastic valve) with tri-clamp fitting diameter 25 mm (1"). Customer provides the hose between the loop valve and the washer tri-clamp fitting.

Steam Condenser

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

Dosing pumps

The model 815 LX is always equipped with two peristaltic pumps (tolerance of $\pm 10\%$ 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.

- No level sensors
- Level sensors for European containers dimensions (90010645)
- Level sensors for US/Canadian containers dimensions (90010644)

Base Cabinet

The base cabinet provides ergonomic loading/unloading. It raises the loading level of the model 815 LX at 750 mm (29.52") and allows storage of two x 10 L (2.5 gallons) chemical containers with maximum dimensions H 320 x W 230 x D 200 mm (12.6" x 9" x 7.9") or rack accessories under the chamber.

The base cabinet will be with level sensors included.

- Standard without base cabinet
- Base cabinet (90010196)
 - 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.

Communication / Control

Dry contact: programmable output for external communication / control of external equipment.

- No additional volt free contact / pilot
- Additional volt free contact / pilot for an extraction (90010643)
- Additional volt free contact / pilot for one water inlet (90010641)
- Additional volt free contact / pilot for one alarm (90010642)

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. External printer is delivered with a cable connected on the RS plug located on rear panel of machine. (90020001)

External Printer and Cable

The model 815 LX washer can be equipped with RS-232 output upon delivery. One external printer and connection cable can be ordered at a later stage.

- No external printer
- External printer and cable (at a later stage) (90010474)
Necessary to select option 90010463

RS-232 /RS-422 / RS-485 Output

Serial port for data acquisition. The RS plug is located on rear panel of washer.

Multiple data ports include Ethernet and RS-232 / RS-422/485 connectors.

- No RS output
- RS-232 output (90010463)
- RS-422 output (90010635)
- or*
- RS-485 output (90010636)

Network Printer

The model 815 LX is also equipped with network printer capabilities.

- No network printer
- Network printer HP (90010633)
- Network printer Brother (90010634)

PRO KIT

To answer the demands for increased control and validation, the PRO KIT tracks a number of parameters and prints out their status OK/NOK or values at the end of the cycle for the customer's records and attention.

It is an easy and efficient method of quick analysis of the report.

PRO KIT 1 LX includes:

- External printer, printout gives documented evidence of the cleaning process.
- Water temperature, the water temperature is measured, both the preset and measured values are printed out.
- Recirculation pump pressure, a pressure sensor will measure and print out the value. If the value is higher than the set value an alarm will be raised and the machine will stop the process.
- Detergent / Acid flow rate, both lines are individually fitted with a flow meter. The device will print out the flow of each line.

PRO KIT 2 LX includes:

- All PRO KIT 1 features
- Conductivity check on the final rinse water

PRO KIT 2 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.

- No PRO KIT
- PRO KIT 1 (90010585)
- PRO KIT 2 (90010586)

Ultima Kit for Labexia accessories

If you are in possession of LABEXIA range racks, they can be used in new models of the 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/ULTIMA without another manipulation

- No ULTIMA kit for accessories
- ULTIMA kit for accessories (70270240)

Preventive Maintenance

Annual Preventive Maintenance agreements ensure optimum washer/dryer performance and extend equipment life. Contact us for details.

Utility Requirements

Utility	Characteristic	Connection	Consumption
Water <ul style="list-style-type: none"> • cold • DI 	Pressure: 200 to 600 kPa 29 to 87 psi Flow: 20 L/min (5.25 gpm) Temperature: Ambient up to 50°C (122°F)	Male threaded: 20/27 (¾")	12 L (3.1 gal) <i>(for each filling or draining phase)</i>
Compressed air <i>(if option selected)</i> <ul style="list-style-type: none"> • DI water loop control <i>(if option selected)</i> <i>(pneumatic valve + clamp included)</i> 	Pressure: 500 to 700 kPa 70 to 100 psi Flow: 200 L/min (53 gpm) Filtration: 5 µ	Male threaded: 20/27 (¾")	Minimal consumption
Electricity	Voltage: request Frequency: 50/60Hz	Cable (50Hz) No cable (60Hz)	See Electrical Table
Vapor exhaust	Atmospheric Exhaust Hood located 300 (12") to 1000 mm (40") above exhaust pipe		60 m³/h (50Hz)
Drain	Fixed standpipe and plumbing trap Height above floor: from 500 (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 <i>(if option selected)</i> <ul style="list-style-type: none"> • Base cabinet 	Fixed standpipe and plumbing trap Height above floor: from 1000 (39.86") to 1200 mm (47.24")	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 50Hz	7	21	25
200-208 VAC, 3+PE 60Hz	7	20	25
200-208 VAC, 1+PE 60Hz	7	34	40
220-240 VAC, 3+PE 50Hz	7	18	20
220-240 VAC, 3+PE 60Hz	7	18	20
220-240 VAC, 1+PE 50Hz	7	31	40
220-240 VAC, 1+PE 60Hz	7	31	35
380-400 VAC, 3N+PE 50Hz	7	11	16
120 VAC, 1+PE 60Hz	2.4	20	25
120 VAC, 1+PE 60Hz	2	17	20

Operating Conditions

Room temperature	5–40°C (41–104°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) <i>(Varies with the load)</i>
Heat dissipation	2380 Btu/h, 600 kcal/h
Noise level	≤ 63 dB(A) <i>(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.)</i>

Technical Data Components

Water circulation system

Design pressure	200 kPa (29 psi)
Operating pressure	Max 600 kPa (87 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 of construction	PP

Dosing system

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

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

Dryer

Installed power, heaters	0.8 kw
Installed fan motors	17 W

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