Product specification

Getinge Lancer Ultima model 1600 LXP/HE-Heavy Duty

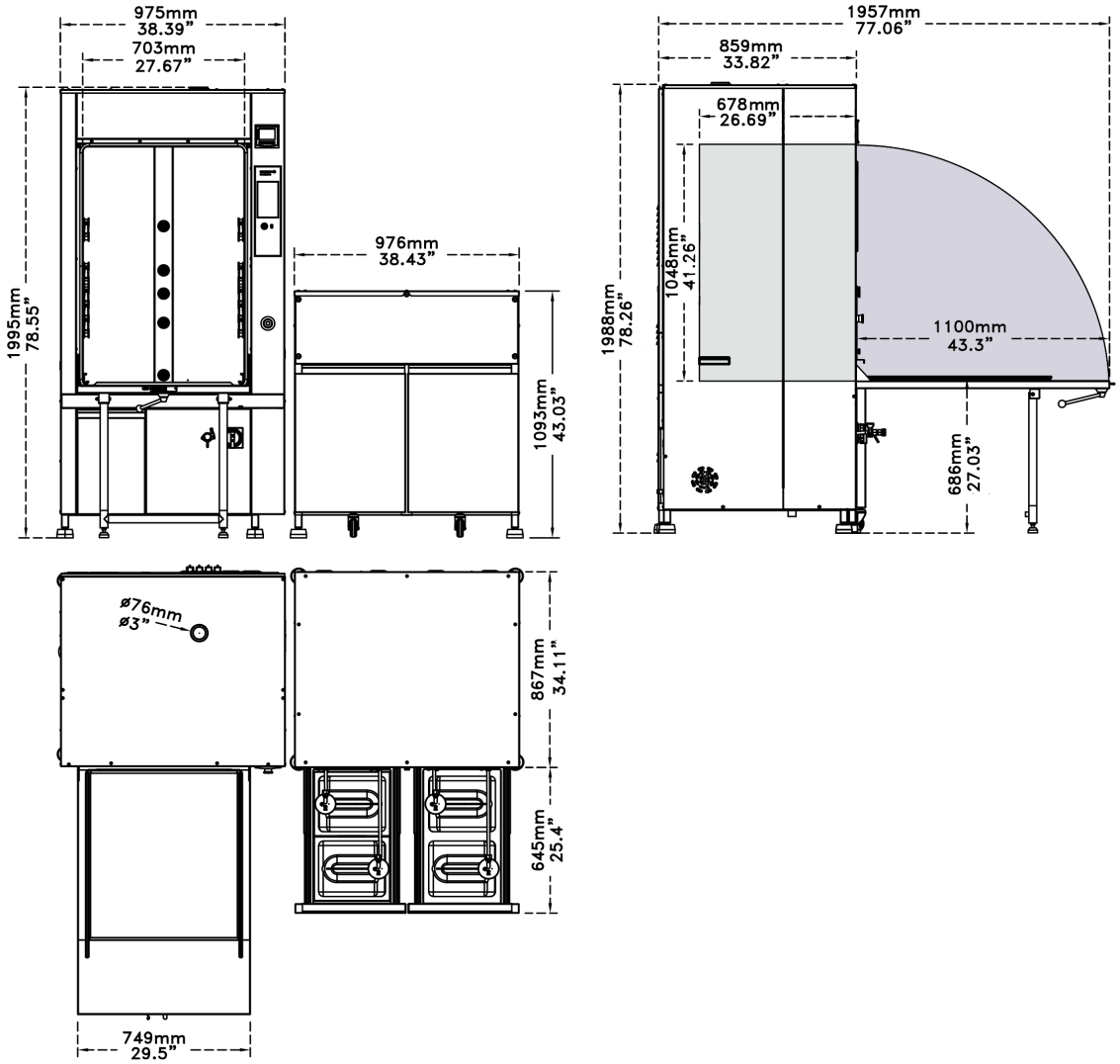
GETINGE

Getinge Lancer Ultima model 1600 LXP/HE-HD

Product specification

Basic specifications

Drawings display front and side of unit with door swing allowance.
Dimensions of the Getinge Lancer model 1600 LXP/HE-HD.



- **Door configuration**
  Fold-down door is made of solid 316L stainless steel.
- **Water per fill**
  30–35 L (7.2–9.2 gal)
- **Wash programs**
  5 presets, 35 custom settings
- **Cycle functions**
  Wash temp: 95°C / 203°F
  Drying: Forced-air chamber, injectors, HEPA Filtered
- **Interior dimensions (machine)**
  (w × h × d)
  703 × 1048× 678 mm
  (27.7" × 41.2" × 26.7")
- **Exterior dimensions (machine)**
  (w × h × d)
  975 × 1995× 859 mm
  (38.3" x 78.5" x 33.8")
- **Weight machine**
  290 kg (640.lb.)
- **Effective chamber volume**
  500 L (17.7 cu.ft.)
- **Load/machine foot**
  0.7 kN
- **Exterior dimensions (chemical Dispensing)**
  (w × h × d)
  976 × 1093× 867mm
  (38.4" x 43" x 34.1")
- **Weight chemical Dispensing**
  150 kg (330 lb.)
- **Load/chemical Dispensing foot**
  0.56 kN

General specifications

The Getinge Lancer Ultima Series Model 1600 LXP/HE-HD Washer/Dryer is specifically designed to meet the demands of the cosmetic and petrochemical industries for cleaning components used in production or glassware used in quality control. The Getinge Lancer Ultima 1600LXP/HE-HD washer/dryer provide top-tier cleaning solutions for components and glassware, offering exceptional performance in a compact design. The efficient use of water, detergents, and rinsing agents reduces environmental impact, while the energy-efficient construction helps lower the total cost of ownership, making it an ideal choice for both industries focused on sustainability and operational efficiency.

Loading racks are evaluated and designed to solve specific cleaning and drying challenges. The exclusive Prolux Plus programmable microprocessor controller commands a full range of prewash, wash, rinse and drying functions through simple touchscreen menus. The model 1600 LXP/HE-HD washer/dryer offers the convenience of five preset programs for light to heavy soiled loads, while up to 35 more complex programs can be customized as needed to meet specific operational requirements..

Features and benefits

The Getinge Lancer Ultima Series Model 1600 LXP/HE-HD Washer/Dryer is equipped with a range of features and benefits specifically designed to enhance performance and ensure operator safety, making it an ideal solution for the cosmetic and petrochemical industries

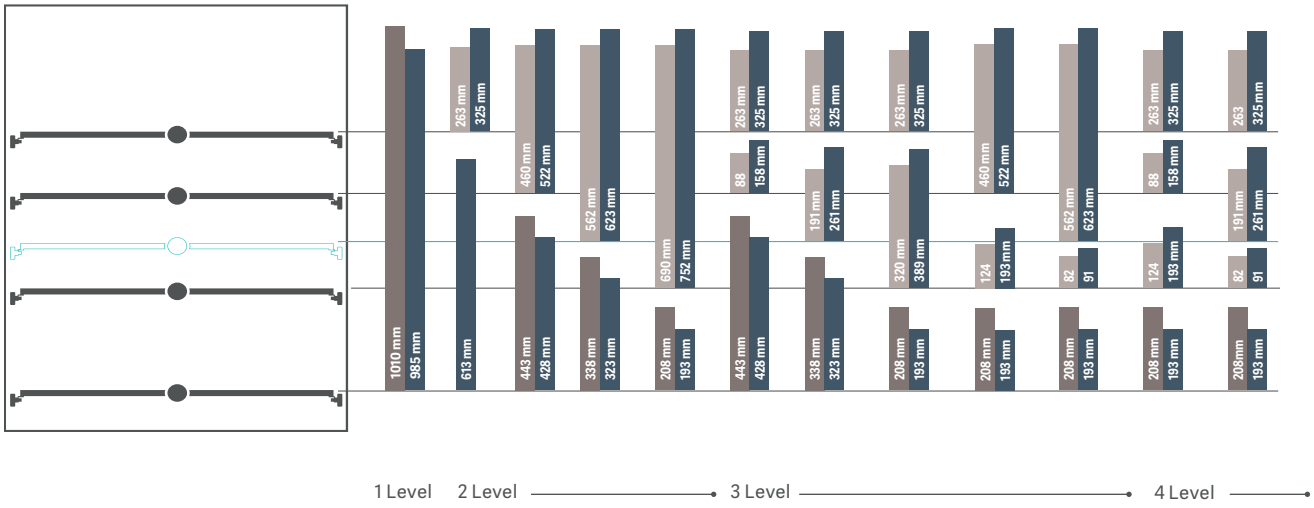
- The Chamber design and it's continuous gasket improves cleaning ability
- Chamber of high grade, sanitary 316L, stainless steel to withstand the powerful washing process and aggressive chemicals often required for thorough cleaning.
- The hydraulic circuit is constructed from durable AISI 316L stainless steel. The main circulation pump is made from AISI 303/304/316, with components in Viton, PVDF, and other parts in Silicon and EPDM that come into contact with the process.
- 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.
- The external detergent cabinet is equipped with four diaphragm pumps and is designed to hold up to four 20L (5.3 gal) canisters. It also includes four chemical level sensors that notify the operator when the consumable levels are running low.
- The large door opens at a convenient height and has gas-dampened support legs for extra-secure loading and unloading. Maximum load on the lowest level is 100 kg (220 lbs) that also include the loading rack.
- Process water is discharged to the drain through a gravity drain valve, which ensures minimal residual water is carried over to the next phase. The operation of the gravity drain valve requires compressed air (refer to the utility requirements in this document).
- User friendly 7" color touchscreen that 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.

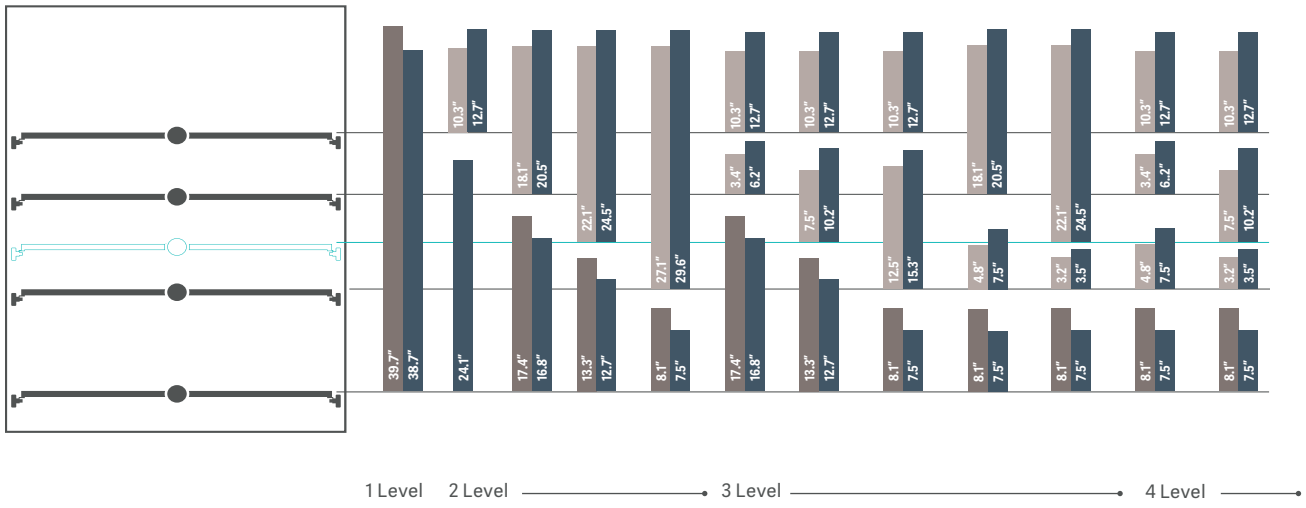
Features and benefits (continued)

- PLC microprocessor designed for simplicity, one-touch start and real-time status indicators. Provides enhanced connectivity for independent monitoring.
- USB port in front of panel.
- Emergency stop button
- Ethernet port is located on the backside of the LAB washer
- Filtered, pulsed hot air is delivered through three turbines for effective drying in and outside of the glassware.
- Fully variable drying temperature.
- The gaskets and seals in contact with the process water are made of food-grade quality materials, ensuring compliance with the stringent standards required in the cosmetic and petrochemical
- Declaration of conformity "type 2.2" according to EN 10204 is provided. For parts in contact with the process.

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.
- The fold-down door creates a platform for proper rack positioning and more comfortable loading and unloading.

Controller

The Prolux Plus 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 Plus 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, hot 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, hot 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, hot 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, hot 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, hot 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, hot 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:** Programmable in 1°C increments for up to 90 minutes and up to 110°C / 230°F.
- **9-Cooling:** Duration of cooling (up to 30 minutes).

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
- Drying time
- Drying temperature

A Prolux Plus microprocessor with adjustable programs ensures the model 1600 LXP/HE-HD washer dryer control. Up to 40 washing programs of which five are factory preset (these programs can be modified accordingly to the outcome of the performance qualification.)* . The microprocessor controls all system functions and monitors system operations.

* more information to be found in the user manuals.

Getinge Lancer Ultima model 1600 LXP/HE-HD
Ordering information

Make your selections:

☐ = Standard selection ◯ = Optional selection

Documentation

To ensure the correct sets of manuals to be included for model 1600 LXP/HE-HD:

User, installation and service/technical manual are available in English and French.

(Manuals are provided electronically on USB device).

Please indicate your requested language for the manuals:

☐ 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)

Language / HMI

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

◯ English ◯ French

Contact your Getinge representative for another language.

Panel

Graphic interface

Screen menus and a graphic user interface are designed to simplify setup and operations including active program, remaining time, warnings, alarms and complete cycle notifications. Screen incorporates 7" color-touchscreen interface with 800 x 480 pixel resolution display.

Program selection

There are five standard factory programs available for cleaning components and glassware, ranging from light to heavy soil. Additionally, 35 more programs can be customized based on requirements.

Framework

Quality AISI 304 stainless steel framework as standard.

Door

The fold-down door and its components in contact with the process are made of AISI 316L stainless steel. The maximum weight load for the door is 100 kg (220 lbs).

Heating

The water in the sump is as standard electrically heated. Drying module is always electrically heated.

Steam allows a fast and precise water temperature adjustment. Strainer, a 25µm (550 mesh) steam filter, steam trap on the steam piping inlet and flexible hose for connection to washer should be provided by others.

The heating of the sump has the following options:

- (●) Electric heating
- ( ) Steam heating with electric valve (90010451)

Super drying

The 1600 LXP/HE-HD model is equipped with a sophisticated super drying system, designed to efficiently dry cosmetic components and glassware commonly used in the petrochemical industry.

Voltage supply

50 Hertz

- ◯ 380-400 VAC, 3N+PE (90010102)

60 Hertz

- ◯ 200-208 VAC, 3+PE (90010021)
- ◯ 480 VAC, 3+PE (90010029)

Main On/Off switch

The main electrical power switch allows the entire unit to be powered down before maintenance or servicing.

Emergency stop

A cycle can be stopped by pushing the emergency shutdown button. The 'shutdown' facility enables the user to stop any cycle in progress. The main purpose of the emergency shutdown is an immediate shutdown of all media and processing. When the E-stop has been reset, the operator or technician must acknowledge the alarm.

The main hydraulic circuit and circulation pump are made of stainless steel

The hydraulic circuit is constructed from durable AISI 316L stainless steel. The main circulation pump is made from AISI 303/304/316, with components in Viton, PVDF. A soft starter allows a progressive start .

Water connections

Three (3) water inlets allow different types of water to be used for washing and rinsing, typically selected from:

- **Cold water**
- **Hot water**
- **RO / DI / PW water**

The hot water valve is designed to handle water Temperatures up to 80°C (176°F).

The RO/DI/PW valve is made of AISI 316L stainless steel to withstand highly corrosive water

Connections are threaded type (see tables for sizes and consumption on page 13).
The water hoses (connection to the washer) are supplied with the machine.

External detergent cabinet and chemical storage

The external detergent cabinet is equipped with four diaphragm pumps and is designed to hold up to four 20L (5.3 gal) canisters. It also includes four chemical level sensors that notify the operator when the consumable levels are running low.

The external detergent cabinet includes a leak and drip tray (stainless steel) beneath each canister to collect any potential leakage from the chemical canisters. The leak and drip trays can easily be removed when needed.

The detergent cabinet must be placed on right hand side at maximum 5 meter (16,4 ft) from the washer itself.

Level sensors for the chemical consumables

The low-level sensor automatically triggers a warning on the message screen to alert operators when the chemical level in the container is low. The controller allows the new cycle to begin but requires the detergent or acid to be replaced or refilled before another cycle can proceed. Chemical containers are equipped with level sensors to prevent pumping when there is no liquid. In case of insufficient chemicals, both a visual and audible alarm are activated.

Dosing pumps

The Ultima 1600 LXP/HE-HD model is equipped with four diaphragm pumps, installed in the external chemical cabinet, enabling the dosing of up to four different chemical consumables. Chemical dosing can be carried out in separate phases or within the same phase of the wash program. These pumps are designed to handle high-viscosity liquids with low and high pH, making them ideal for the cosmetic industry. Furthermore, each pump includes a bleed valve to eliminate air from the chemical hoses, which are made of PVDF. A non-return valve is positioned near the chemical inlet on the chamber to prevent any leakage.

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)

Sampling system

A sampling valve can be fitted on the sump of the washer to perform sampling of the washer water. A sampling selection in the program stops the washer before each draining phase ("multi-phase" sampling) or before the final rinse draining phase ("final rinse" sampling). The operator can then perform the sampling. The operator acknowledges the sampling and the program resumes.

Sampling valve is located on fascia panel (easy accessible without need to open a panel).

- (●) No manual sampling valve
- ( ) Manual sampling valve (90010532)

Control and validation

Pump pressure monitoring

The Ultima 1600 LXP/HE-HD model is equipped with a pressure monitoring system that monitor that the correct pressure is distributed by the main circulation pump to obtain optimal cleaning performance.

Conductivity monitoring for final rinse

The standard feature conductivity-meter gives documented evidence of the cleaning process including the verification of the water quality during final rinse. The conductivity transmitter is placed on the front panel close to the HMI where a visual reading of the conductivity can be made.

Draining

The Ultima 1600 LXP/HE-HD model is equipped with a gravity drop drain. The pneumatic valve is in stainless steel AISI 316L.

A connection on a 50 mm (2") line with an air breaker is recommended to isolate the washer from the draining network (open connection).

According to wash room draining system, the washer/dryer can be equipped with following options:

Effluent neutralization option, see page 10.

Communication / control

Dry Contact (standard feature): A programmable output used for external communication or control of external equipment.

The volt-free contact package for external communication includes the following signals:

- Cycle in process
- Alarm activated
- Drying/exhaust activation
- Request for purified/demineralized water

RS-232 output

The RS-232 plug is located on rear panel of washer.

Network printer

The model 1600 LXP/HE-HD is also equipped with network printer capabilities.

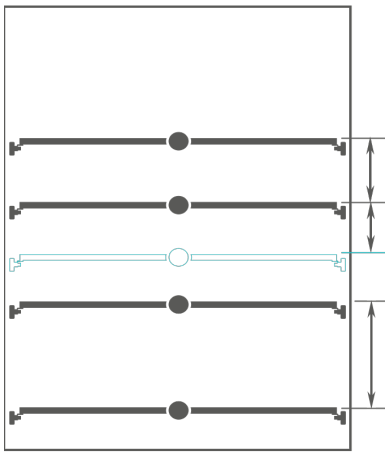
- (●) No network printer
- ( ) Connection for network printer HP (90010633)
- ( ) Connection for network printer Brother (90010634)

Runners and water entry position adjustment

Runners and water entry positions can be adjusted in the chamber to suit customized glassware height and loading.

Contact your Getinge representative before selecting this option.

- [x] No runners and water entry position adjustment.
- [ ] Runners and water entry position adjustment (01060179).



Please note the dimensions between each water entry position.

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Floor anchors

All units are supplied with adjustable feet. Additionally, brackets may be provided to secure the unit to the floor.

- [x] No floor anchors.
- [ ] Brackets for anchoring the washer and detergent cabinet to floor after installation (90010272).

  Seismic anchorage compliance requirements for the 2022 California Building Code and ASCE 7-16.·

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 • hot • RO/DI/PW	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")	30–35 L (7,9–9.2 gal) (for each filling or draining phase)
Compressed air	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
Steam feed and steam condensate (if option selected)	Pressure: 200 to 600 kPa / 29 to 87 psi Filtration : 25µm	Male threaded: 15/21 (½")	120 kg/h (265 lb/h) max 30 kg/h (66 lb/h) per cycle Typically 1 cycle/hour is used
Electricity	Voltage: request Frequency: 50/60 Hz	Cable (50 Hz) No cable (60 Hz)	See Electrical Table
Vapor exhaust	Atmospheric exhaust hood located 300 (12") to 1000 mm (40") above exhaust pipe		120 m^3/h
Drain	By gravity	Tube 33.7 mm (1⅝") outlet into 2" floor sink	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 60 Hz	21	59	63
380-400 VAC, 3N+PE 50 Hz	21	31	40
480V 3+PE 60 Hz	21	26	35

Steam

Voltage and frequency	kW	Full load amps (A / phase)	Amps Protection (A)
200–208 VAC, 3+PE 60 Hz	4.2	12	16
380–400 VAC, 3N+PE 50 Hz	4.2	7	10
480 VAC, 3+PE 60 Hz	4.2	7	10

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	30–35 L/phase (7.9–9.2 gal/phase) (Varies with the load)
Ingress protection	IP22
Heat dissipation	2538 Btu/h, 640 kcal/h
Noise level	≤ 69 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	750 L/min (198 gpm)
Motor	2.4 kW
Material construction	Stainless steel pump in AISI 304.

Drain valve

Material of construction	Stainless steel (seal PTFE)

Product circulation system

Flow, prominent pump	19l/h - 2 bar
Material construction	PVDF + PTFE

Heater steam

Heating velocity	7–8 °C/min (44.6–46.4°F/min) (dependent on steam pressure)

Heater electrical

Heating velocity	3.5–4°C/min (39°F/min) (dependent on voltage)
Installed power	400 V: 18 kW, 230 V: 18 kW

Dryer

Installed power, heaters	4.2 kW
Installed fan motors	3 × 53 W

Notes

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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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