

Getinge GE 690 General Purpose Scientific Sterilizers

Product Specification

PRODUCT

Getinge model GE 690 general purpose series sterilizers are microcomputer controlled automatic steam sterilizers with operator selectable cycles for general purpose laboratory use. The cycles employ mechanical air removal with a series of pressure/vacuum pulses to effectively displace air by progressive dilution. The PACS 3000 microcomputer sequences the process and monitors all cycle phases, providing both audible and visual notification in the event of a deviation from operating parameters.

APPLICATION

For general-purpose steam sterilization of equipment, instruments and utensils in vented containers, animal cages, feed, and bedding material (acc. to selected cycle combination). Special process combinations are available for: Liquids in closed rigid containers; or high contaminant effluent sterilization applications. Temperature range is from 105°-135°C. The liquid exhaust is microcomputer controlled for linear and consistent liquid cool down.

CHAMBER SIZES

Model	Chamber Size (Nominal Internal) w x h x d	Overall Size W x H x D	Chamber Volume (Nominal Internal)
<input type="checkbox"/> 6910	672 x 920 x 1000 mm	2280 x 2350 x 1318 mm	618 L
<input type="checkbox"/> 6913	672 x 920 x 1350 mm	2280 x 2350 x 1668 mm	835 L
<input type="checkbox"/> 6915	672 x 920 x 1540 mm	2280 x 2350 x 1858 mm	952 L
<input type="checkbox"/> 6917	672 x 920 x 1700 mm	2280 x 2350 x 2018 mm	1051 L

DOOR SELECTIONS SERVICE SIDE

As seen from control side

- Single Door
- Double door
- Right Side Service, (Standard)
- Left Side Service, (Option)

INSTALLATION SELECTION

- Recessed Through Wall(R) (Single Door)
- Cabinet Encloser (C) (Single Door)
- Recessed Through Two Walls (Double Door)
- Cabinet Encloser (RC) (Double Door)
- Inspection door mounted in extended fascia



CROSS CONTAMINATION SEAL

- Cross Contamination Seal, Non-control Side
- Cross Contamination Seal, Control Side
- Dual Cross Contamination Seal

VOLTAGE SUPPLY

- 200 V, 3 phase 50Hz (type 1, see table utility data section)
- 230 V, 3 phase 50 Hz (type 2, see tbl. util. data sect.)
- 400 V, 3 phase 50 Hz (type 3, see tbl. util. data sect.)

PROCESS COMBINATIONS (APPLICATIONS)

See process charts and descriptions.

Laboratory / Production	Animal facilities	Liquid cooling
<input type="checkbox"/> P3100	<input type="checkbox"/> P3220	<input type="checkbox"/> L3200
<input type="checkbox"/> P3101	<input type="checkbox"/> P3222	<input type="checkbox"/> L3202
<input type="checkbox"/> P3200	<input type="checkbox"/> P3223	<input type="checkbox"/> L3203
<input type="checkbox"/> P3201		<input type="checkbox"/> L3300 (n/a for 6917)
<input type="checkbox"/> P3202		<input type="checkbox"/> L3302 (n/a for 6917)
<input type="checkbox"/> P3203		

STANDARDS & CODES

The standards complies or exceeds the requirements of:

- EN 60204-1 (IEC 60204-1) Safety of machinery - Electrical equipment of machines - Part 1: General requirements.
- EN 61310-1 (IEC 61310-1) Safety of machinery - Indication, marking and actuation - Part 1: Requirement for visual, auditory and tactile signals.
- EN 61326-1 (IEC 61326)
- EN 50081-1 Emission, Electromagnetic compatibility - generic emission standard.
- EN 50082-1 Immunity, Electromagnetic compatibility - generic immunity standard.
- EN 61000-3-2 Harmonics, Electromagnetic compatibility - limitations of voltage changes.
- EN 292-1 (A) Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology.
- EN 292-2 (A) Basic concepts, general principals for design - Part 2: Technical principles and Specifications.

PED, Pressure Equipment Directive 97/23/EC. (EUR)

MHLW, Ministry of Health, Labor & Welfare. (JPN)

Mechanical features

CHAMBER CONSTRUCTION

The sterilizer chamber, jacket and door are constructed from solid, high quality, type 316 Ti / W.Nr. 1.4571 stainless steel. Internal surfaces are highly polished to facilitate cleaning (better than $0.5 \pm 0.13 \mu\text{m}$). The internal corners are radiused to aid cleaning and the chamber floor slopes to a central drain. A stainless steel mesh strainer protects the drain port from blockage by debris. The sterilizer chamber is completely insulated with with minimum 5 cm chloride free mineral wool, encased in a rigid removable sheet aluminum housing. The chamber is mounted on a stainless steel framework with adjustable feet.

AUTOMATIC HORIZONTALLY SLIDING DOOR(S)

The door is fully automatic in operation and is opened and closed by a pneumatic motor and belt system. Door operation is controlled via push buttons on the control panel. Mechanical, electrical and software interlock devices prevent improper operation. A mechanical safety edge stops the door if it is obstructed while closing, protecting the operator and loading equipment. The door is automatically sealed. For double door units a safety and cross-contamination interlock is provided. The door seal is a silicon rubber 'O' ring. On commencement of a process, the gasket is pressed against the rear face of the door by steam (optional) or compressed air pressure (standard). A pressure switch monitors the gasket pressure throughout the process and initiates an alarm in the event of loss of pressure. Steam may not enter the chamber unless this switch is actuated. On completion of the process, the seal is withdrawn under vacuum. The



door and sealing mechanisms are safe, reliable and virtually maintenance free. The same basic mechanisms have been used on Getinge autoclaves for more than 20 years.

Steam to door gasket

PERSONNEL SAFETY FEATURES

In addition to the door safety systems, the chamber is provided with a pressure monitor that ensures that all chamber pressure has been relieved prior to allowing the door(s) to open. As an 'intrinsic safety' feature, when the door seal is retracted the chamber is completely vented to atmosphere while the door is still retained in the fully closed and mechanically locked position.

MECHANICAL VACUUM PUMP

A highly efficient liquid ring vacuum pump, mounted on vibration isolators for quiet operation, is provided to effectively remove air from within the chamber. The vacuum pump is connected in series with an efficient condenser to assist air removal and protect the vacuum pump from excessive temperatures. The pump impeller is cast bronze.

DRAIN COOLING

The drain discharge is cooled down to reduce the effluent temperature to an average of 60°C or less. Under a limited period of time the temperature could be higher.

VALVES & COMPONENTS

Process valves are pneumatically operated piston valves, providing longer service life and less maintenance. All standard components are non-proprietary and commonly available world wide.

SAFETY VALVES

Safety valves are provided on the chamber and jacket. (Piped to discharge to floor. Program 3302/3 require special venting.)

PRESSURE GAUGES

Pressure gauges mounted in fascia on loading side are provided for:

- Chamber pressure
- Jacket pressure
- Process Steam supply pressure

Pressure gauge mounted in fascia on unloading side is provided for chamber pressure.

TEMPERATURE AND PRESSURE SENSORS

The PACS 3000 control system has a built-in linearization, to correct the individual characteristics of each type of sensor connected to the system. Each sensor is calibrated with individual constants to correct the deviation in manufacturing and aging. The following sensors are provided and are used in the automatic control of the sterilizer:

- Chamber Drain Temperature Sensor (Control)
- Jacket Temperature Sensor
- Chamber Pressure Sensor
- Chamber Load Temperature Probe (for liquid process control)

The temperature sensors are Pt100, according to IEC 571, accurate to $\pm 0.1^{\circ}\text{C}$.

The pressure sensor is equipped with software based temperature compensation. Accuracy is 1% over the range 0 to 5 bar(a).

Additional Load Temperature Probe(s) Qty: _____

VALIDATION CONNECTIONS

The chamber is provided with one 1½ T/C connection for optional vacuum/pressure gauge (VT) and a 1" connection for test sensor (TT).

AIR ADMISSION FILTER

A disposable 0.22u bacteria retentive filter is provided for air admission during vacuum break at the end of a cycle. Filter replacements intervals can be monitored by the PACS 3000.

- Stainless steel filter housing. (Only applicable with L-program combination)

cGMP FEATURES

Getinge has incorporated features in the sterilizer to meet or exceed current Good Manufacturing Practices (cGMP). Getinge GMP features provide temperature distribution with a maximum variation of plus or minus (+/-) 0.5°C from the mean chamber temperature once stabilization is achieved. Secondary temperature verification is furnished by including one additional temperature sensor located in close proximity to the drain temperature sensor. Digital read-out of the secondary temperature sensor is provided to the operator. A condensate level sensor is installed down stream from the drain temperature sensor. This ensures that the drain line temperature sensor is unaffected and that condensate does not come into contact with the product being sterilized. An alarm will sound if condensate is detected in the drain line. Analog gauge(s) are furnished for indication of chamber pressure. The gauge is constructed in such a manner to prevent dead legs from existing in the process lines. Gauges conform to cGMP standards for accuracy, scale and readability. Process piping is designed and constructed to minimize dead legs. A chamber port is provided to accommodate temperature sensors for validation.

Mechanical Options

PIPES & VALVES

PROCESS PIPING

Steams to chamber piping systems including all chamber components are constructed of copper, bronze or brass. Pipe connections are threaded, flanged, brazed or soldered as applicable. Valves and major components are arranged to be easily accessible or removable for servicing and replacement.

NON-PROCESS PIPING

Non process piping systems are constructed of copper, bronze or brass. Pipe connections are threaded, flanged, brazed or soldered as applicable. Valves and major components are arranged to be easily accessible or removable for servicing and replacement.

STAINLESS STEEL PROCESS PIPING

Steam to chamber piping systems, including all chamber components are constructed of stainless steel. All other pipe work connected to the chamber, up to and including the first isolating valve is also constructed of stainless steel. Stainless steel piping is constructed of threaded and/or compression fittings. Valves and major components are arranged to be easily accessible or removable for servicing and replacement

STAINLESS STEEL SANITARY PROCESS PIPING

Steam to chamber piping systems, including all chamber components are constructed of stainless steel. All other pipe work connected to the chamber, up to and including the first isolating valve is also constructed of stainless steel. Stainless steel piping in contact with clean steam and sterile air are orbital welded pipe with tri clamp connectors. Other stainless steel piping is welded with flanged or threaded connections. Valves and major components are arranged to be easily accessible or removable for servicing and replacement

STAINLESS STEEL JACKET PIPING

Stainless steel non-sanitary jacket piping. Threaded and compressed fittings.

SELF CLEANING DRAIN STRAINER

The external maintenance drain strainer is equipped with an automatic cleaning system. Water is back flushed through the strainer to increase the service period before manual cleaning. This is particularly necessary in autoclaves that are used to sterilize animal feed and bedding. Note, compressed air demand increases with this option. See utility data for further information.

STEAM SUPPLY

Central Steam Supply (units are supplied as standard to be connected to a building steam supply)

IN LINE FILTER STERILIZATION

This additional factory pre-set program is used to sterilize the chamber air admission filter in place. The program will automatically sterilize and dry the filter with no user intervention.

IN LINE FILTER WATER INTRUSION TEST

- This optional factory pre-set program is used to test the chamber air admission filter in place. The program will automatically test and dry the filter with no user intervention. A visible and audible alarm sounds in case of a filter failure. (Delivered with Satorius filter house and filter cartridge).

CONDENSATE RETURN

- The equipment can be furnished with a condensate return utility connection. Only condensate that has not come in contact with the product will be returned to the customers plant steam generator. This utility may be connected to the customers condensate return system while installing the equipment.

WATER CONSERVATION SYSTEM

- Water Conservation System

Getinge's water conservation system is used to limit the consumption of the potable water during the process and to guarantee maximum efficiency of the vacuum pump. (Optionally may be used with a chilled water-cooling loop for further savings; see utility tables for reduction.)

- Chilled water with a maximum temperature of X°C recirculation connection for external cooling (recirculation) which may reduce the potable water consumption by up to **75%**. This option may only be combined with water conservation system. This option may be connected to the customers chilled water return system while installing the equipment.

MEDIA GAUGES (SERVICE AREA) & UTILITY ALARMS

Chamber pressure gauge will be provided in the service area. Additional incoming media gauges are available in the Service area.

- Incoming Steam Pressure Gauge
- Incoming Air Pressure Gauge
- Incoming Water Pressure Gauge
- Incoming utility alarms / Steam
- Incoming utility alarms / Air
- Incoming utility alarms / Water

PIPE INSULATION

- Insulation type Chloride free Pipes insulated. All pipes that average greater than 60° C.
- Insulation type Chloride free Pipes insulated. Cold water pipes are insulated.

PASSIVATION

- Citric acid passivation for the interior surfaces of the chamber, chamber doors, process piping and process valves.

CONTROL SYSTEM FEATURES

CONTROL SYSTEM PACS 3000

The PACS 3000 modular PLC control system dedicated to controlling of Getinge sterilizers, including:

- CPU processor with battery backup
- Digital in- and outputs for sterilizer control
- Analog measuring inputs
- COM ports for printer & PC communication

The PACS 3000 controls all system functions, monitors system operations, both visually and audibly alerts the operator of cycle malfunctions and, on demand, provides visual indication of the chamber temperature and pressure.

OPERATOR PANELS

The PACS 3000 control system is operated via an easy-to-use "menu tree". As default, the operator has access to the cycle selection, cycle start and door control. Operators can only run "validated" cycles. Access to other functions, such as running test cycles, setting parameters, calibration, service and maintenance is controlled using pre-defined access levels preventing unauthorized access.

'MULTIFLOW' - DUAL STERILIZERS CONTROLS

- The unit may be provided with dual control capabilities allowing for pass-through sterilization of materials entering into containment areas, decontamination of used items and waste leaving the area, and single door sterilization applications from either side of the unit.

OPERATOR PANEL CONTROL SIDE

OP 30

- 5,7" color display.
- Door open/close buttons.
- Cycle &Phase.
- Temperature(s).
- Graphical Process
- Presentation.
- Plot graph, Bar graph. Parameter settings, Maintenance & Service menus.
- System configuration.



OP30 OPERATOR INTERFACE FEATURES

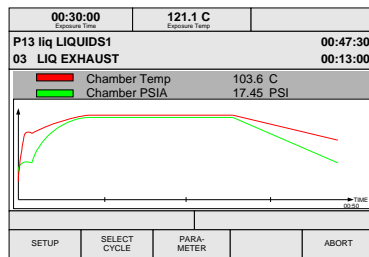
The OP30 color screen is divided into specific sections to display selection and performance information in a consistent manner. The top section identifies the time and temperature selected for the cycle. Below that is the type of cycle selected. The middle portion provides a choice of three screens to view actual, real time cycle information. "pop-up" dialog boxes to change values appear within parameter selection screens to implement changes. Parameters are

password protected. The screens are:

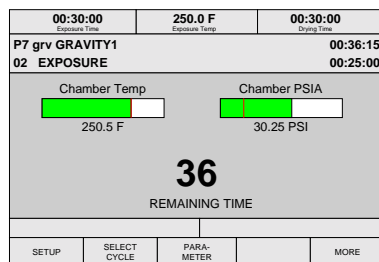
- **Detail.** Displays real time process information in text form

00:03:00 Exposure Time	135.0 C Exposure Temp	00:20:00 Dryup Time
P1 vac PREVAC1		00:00:00
01 STANDBY		01:12:44
Chamber Temp	29.1 C	
Cham Press/PSIG	0.00 PSI	
Jacket Temp	129.9 C	
Atmosphere PSIA	14.25 PSI	
Chamber PSIA	14.25 PSI	
Steam Table Diff	-13.82 PSI	
Exp. Temp Max	135.6 C	
SETUP	SELECT CYCLE	PARA-METER
		UNSEAL

- **Plot Graph.** Displays cycle temperature and pressure in a colored graph during a cycle.



- **Bar Graph.** Displays the temperature and pressure in a bar graph, with a large, easy to read, time remaining to the end of the cycle (averages the last three cycles for each cycle type).



OP30 O/I FEATURES

The lower portion of the screen provides text alarm messages and non-critical system messages, both using color displays, and shift key identifications. Navigating the various screens is accomplished by use of soft keys, directional arrows to move the cursor and change values and the Enter key. Up to 19 factory recommended cycles are available. Time and temperature can be changes using a quick edit feature. Each change prompts operator acceptance and a "Save" soft key.

For Supervisor access, an alpha-numeric display provides levels of access for individual operators and service. Using the soft key labeled "Setup" provides the ability to:

- Select operating screens
- Print the last cycle
- Adjust system menu for setting the calendar
- Establish users
- Passwords for each operator
- Access the "About" selection to identify the model and system software number
- Choose language, date format, and temperature and pressure measurement

- Adjust parameters through password access

The Supervisor can also select a Utilities Control feature, which provides a seven-day timer for programmed startup and shutdown of the sterilizer. The Utilities Control System shuts off water and steam to the unit to conserve energy. Cycles running beyond the programmed shutoff time will be completed. Finally, an optional Automatic Steam Boiler Blowdown System can be programmed to blow down the steam boiler automatically once a day, while cooling hot condensate through internal piping. This is typically scheduled during off-peak time.

OP 50

- Door Open/Close Buttons
- Status LED:s (on Screen)
- 10.4" Color Screen for Process Info:



- Multi-Line Presentation
- Remaining Time
- Cycle & Phase
- Temperature(s)
- Graphical Process Presentation:
 - Plot Graph (High Resolution)
 - Bar Graph (High Resolution)
- Parameter Settings
- Maintenance & Service Menus
- System Configuration

OPERATOR PANEL NON CONTROL SIDE

OP10

- For Unloading Side Only
- Door Open/Close Buttons
- Status LED:s



OP 15

- For Unloading Side Only
- Door Open/Close Buttons
- Status LED:s
- Two-line Text LCD for Process Info
 - Remaining Time
 - Cycle
 - Temperature(s)



OP20

- Door Open/Close Buttons
- Status LED:s
- Two-line Text LCD for Process Info
 - Remaining Time
 - Cycle & Phase
 - Temperature(s)
- Cycle Selection & Start
- Parameter Settings
- Maintenance & Service Menus



OP 30 (See specifications under section Operator Panels Control Side).

OP 50 (See specifications under section Operator Panels Control Side).

SELF DIAGNOSTIC PROGRAM

PACS 3000 features a comprehensive alarm/alert system, with automatic triggering of pre-programmable information alerts (service intervals, maintenance etc.). The self-diagnostic program that monitors the sterilizer performance is pre-programmed to alert the operator for:

- Air filter replacement

PACS 3000 CYCLE DOCUMENTATION

Cycle performance data is printed during the cycle and at cycle complete. The printed cycle information includes transition points, pressure and temperatures, cycle start time, date, both sterilizer and cycle number, and any cycle alarm that occurred during the cycle. In case of printer failure during the cycle, the PACS 3000 stores the cycle data and can, on demand, reprint the last cycle.

- Daily cycle # - total cycle count
- Summary verification of time at selected temperature (min/max values)
- Cycle verification and signature line
- F0 Control. The control system allows control of liquid sterilization by F0 value rather than time and temperature. This mode of control may optionally be used for heat sensitive liquids.

The PACS 3000 supports following printing modes:

- Data printout – numerical data
- 32 column thermal printer w/auto take-up. (Standard)

Cycle performance data is printed during this cycle and at cycle complete. The printed cycle information includes transition points, pressure and temperatures, cycle start time, date, both sterilizer and cycle number: and cycle alarm that occurred during this cycle. In case of printer failure during the cycle, the PACS 3000 stores the cycle data and can, on demand, re-print the last cycle.

PRINTER TO PACS

- HP Inkjet color printer, remote mounted. Printer is configured by Getinge.
- Epson 80 column dot matrix printer, remote mounted.
 - Cycle graph (in color) together with numerical data

- 2 column cycle printout with cycle data in the left column, together with a cycle graph (in color) in the right column.

Printer stand (shelf for printer)

LEAK TEST.

The sterilization process is sensitive to residual air in the chamber. If the chamber is not leak-tight, sterilization efficacy may be impaired. Getinge vacuum sterilizers are equipped with a fully automatic leak test process to confirm leak tightness of the chamber.

ALARMS

Automatic process check-up and failure corrections are provided with the PACS 3000 control system. In the situation of a disturbance during the sterilization cycle, the process enters an alarm phase, which safely will end the process automatically. The range of alarms include:

- Temperature & pressure sensor failure
- Service failure Alarms

Alarms

- Power Failure Alarm
- Door Failure Alarm
- Gasket Failure Alarm
- Phase Timeout Failure Alarm
- Analogue Input Failure Alarm
- Safety Interlock Failure Alarm
- PACS Fault Alarm
- Vacuum Pump Failure Alarm
- Fan Failure Alarm
- Pump Failure Alarm
- Motor Failure Alarm

AUTO ABORT

In case of a failure alarm, the sterilizer goes into an alarm phase. The sterilizer waits for the operator technician to decide how to proceed. There are 2 alternatives of action:

1. Abort cycle, through pressing the start button.
2. Use stepping key (This makes it possible to step phases through pressing the alarm button or re-start the cycle). Not through safety set points.

EMERGENCY STOP

A cycle can be shutdown by pushing the emergency shutdown button. The 'shutdown' facility enables the user to stop any cycle. It can then be taken into a safe ending unless the cycle is already at or beyond that stage. If this facility is used, then a 'Emergency Shutdown' alarm will be activated.

The main purpose with the emergency shutdown is an immediate shutdown of all media and processing. There is two different ways to end the process after a shutdown. When the E-stop has been reset, can the program either:

- Be taken to safe ending via the start button or
- Restarted by authorised person (requires key)

Options for control system

INDEPENDENT CYCLE DOCUMENTATION

The independent cycle documentation for redundant monitoring is using separate sensors, connected directly to the independent recorder.

- PACS Supervisor is a completely independent monitoring

and documentation system that constantly receives readings from PACS 3000 and compares them with own independent sensors. A continuous cross-check of the sterilizer safety system and the sterilization period according to the limit values in EN-285 & EN-554 is also performed. PACS Supervisor prints all process data on one printout, eliminating the need for a separate recorder.

Printer selection (connection located in service area):

- HP Inkjet color printer for the supervisor. Printer is configured by Getinge.
- Epson 80 column dot matrix printer for the supervisor.
- 2 channel line recorder on control side for independent monitoring of chamber temperature and chamber drain.

CS1000

- The optional CS1000 software runs on the Windows '95-'98, NT & 2000 operating system. The software offers complete control over all aspects of the PACS 3000 control system. Operator, calibration, validation, maintenance and programming functions can be accomplished using the CS1000 software. The software is presented in classic Windows folder format with point and click commands and has online help to assist the user.
 - Remote mounted desktop PC is provided to run CS1000 software.
 - A free standing PC enclosure is provided to house a desktop PC, slide out keyboard, monitor and printer.
- Step key in front fascia
- PC connection in front fascia
- Light in electrical enclosure
- Auxiliary electrical outlets in service area
- Stainless steel electrical cabinet, Nema 4XSS rated

Optional Allen Bradley Control System

- An Allen Bradley SLC 500 series control system may be supplied as an alternate to the standard Pacs3000 system. All software for our Allen Bradley control system option is created in RSLogix and panel builder software, respectively. Our Allen Bradley control system option functions similarly to the PACS 3000. Display screens and cycle functions are identical, with the exception of our application specific PACS boolean programming language.

- PV600

Control side



- PV600

Non-control side

- PV1000, color touch screen

Control side



- PV1000, color touch screen

Non-control side

- Ethernet communication port

CYCLE TYPES LABORATORY / PRODUCTION APPLICATIONS

See the program combination chart in the appendix of this document for an overview of the cycles provided.

LABORATORY / PRODUCTION

P3100 The P3100 program combination has been designed for the sterilization of items such as utensils, textiles, rubber stoppers and filters. Parameters for each process may be adjusted and saved for each respective program. See the program combination chart in the appendix of this document for an overview of the cycles provided.

P3101 As program P3100 but, only with P1 program. An economical alternative for specific process applications.

P3200 This cycle is equipped with a self cooling process for vented containers. A liquid loss about 5% due to evaporation cooling is to be expected. Set at 0.75 psi/min (5 kPa/min) during manufacture, the liquid exhaust rate is adjustable within the range of 0.1 - 1.5 psi/minute (1 to 10 kPa/minute). The P3200 program combination has been designed for the sterilization of items such as utensils, textiles, rubber stoppers, filters and liquids in vented containers.

P3201 As program P3200 but, only with P1 and P2 program. An economical alternative for specific process applications.

P3202 The P3202 program combination has been designed for the sterilization of items such as utensils, textiles, rubber stoppers, filters, and vented liquids when effluent sterilization is required. These program combinations are recommended **for BSL-3 application**. The Getinge effluent sterilization process is uniquely designed to entrap potentially contaminated discharge from the sterilizer until the completion of the process. Air removal is through a bacteria retentive filter and steam is injected into the bottom of the sterilizer to heat contained condensate.

P3203 The P3203 program combination has been designed for the sterilization of items such as utensils, textiles, rubber stoppers, filters, and liquids. All processes in this combination are used to entrap and deactivate the effluent exiting the sterilizer drain.

ANIMAL FACILITIES

P3220 The P3220 program combination has been designed for the sterilization of items such as; animal feed, utensils, textiles, rubber stoppers, filters, vented liquids, animal cages and bedding.

P3222 The P3222 program combination has been designed for the sterilization of items such as animal feed, utensils, textiles, rubber stoppers, filters, vented liquids, animal cages and bedding when effluent sterilization is required. These program combinations are recommended **for BSL-3 application**. One process in this combination is used to entrap and deactivate the effluent exiting the sterilizer drain.

P3223 As program P3222 but only with P2 program.

LIQUID COOLING

L3200 The L3200 program combination has been designed for the sterilization of items such as utensils, textiles, rubber stoppers, filters and **liquids** in either **sealed** or vented rigid containers. The Getinge air-overpressure jacket cooling process is designed for slow cooling of liquids in vented containers where boiling and liquid loss needs to be prevented, or to prevent liquids in sealed rigid containers from rupturing. Filtered compressed air is introduced into the chamber, and cooling water into the jacket at the completion of the exposure phase. The air ballast prevents boiling of vented liquids and provides counter pressure for sealed liquids in rigid containers. The cooling water in the jacket absorbs energy normally given up during a slow exhaust process. This process extends the entire cycle. Time extension is dependant upon load configurations.

L3202 As program L3200 but the P2 filter program is replaced with an effluent cycle.

L3203 As program L3200 but, all cycles with effluent sterilization.

FORCED AIR LIQUID COOLING

L3300 The L3300 program combination is similar to L3200 but, includes a uniquely designed fan to improve cooling and shorten the processing time.

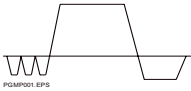

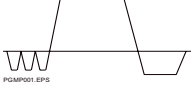



L3302 As program L3300 but the P2 filter program is replaced with an effluent cycle.

GEL. This is the first level of forced aeration system on a sterilizer, using a magnetic fan and jacket-cooling phase. This low cost system gives a major time reduction of the cooling phase, speeding up the process time.

PROGRAM COMBINATION CHARTS

GETINGE
P3100

Program combination

<p>P1</p>  <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h</p>
<p>P2</p>  <p>PGMP001.EPS</p>	<p>PARAMETER SETTINGS Sterilizing temp.: 121 °C Sterilizing time: 20 min. Drying vacuum time: 5 min.</p>
<p>P3</p>  <p>PGMP001.EPS</p>	<p>PARAMETER SETTINGS Sterilizing temp.: 135 °C Sterilizing time: 7 min. Drying vacuum time: 5 min.</p>
<p>P4</p>  <p>PGMP002.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Slopes: 50 - 1000 mbar / min.</p>
<p>P5</p>  <p>PGMP005.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Drying: 0 - 10 pulses</p>
<p>P6</p>  <p>PGMP006.EPS</p>	<p>PARAMETER SETTINGS Temp: 135 °C Time: 7 min. Max accepted leak rate 13 mbar / 10 min.</p>

RA1122



Liquids must be processed with appropriate liquid programs only.
Hazardous waste must not be processed in this sterilizer.

GETINGE
P3101

Program combination

<p>P1</p>  <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Prevac. pulses: 1 - 99 Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Ramps: 0.73 - 14.5 psi/min.</p>
<p>P6</p>  <p>PGMP006.EPS</p>	<p>PARAMETER SETTINGS Temp: 135 °C Time: 7 min. Max accepted leak rate 0.19 psi/10 min.</p>

RA1123



This machine is not intended for use with liquid loads.
Hazardous waste must not be processed in this sterilizer.

PROGRAM COMBINATION CHARTS

GETINGE
P3200

Program combination

<p>P1</p> <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h</p>
<p>P2</p> <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h</p>
<p>P3</p> <p>PGMP003.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h</p>
<p>P4</p> <p>PGMP002.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Ramps: 0.73 - 14.50 psi / min.</p>
<p>P5</p> <p>PGMP005.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Drying: 0 - 10 pulses</p>
<p>P6</p> <p>PGMP006.EPS</p>	<p>PARAMETER SETTINGS Temp: 135 °C Time: 7 min. Max accepted leak rate 0.19 psi / 10 min.</p>

RAA140

Liquids must be processed with appropriate liquid programs only. Hazardous waste must not be processed in this sterilizer.

GETINGE
P3201

Program combination

<p>P1</p> <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Prevac pulses: 1 - 99 Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Ramps: 0.73 - 14.5 psi/min</p>
<p>P2</p> <p>PGMP003.EPS</p>	<p>PARAMETER RANGES Prevac pulses: 0 - 1 Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h</p>
<p>Automatic leak rate test</p> <p>P6</p> <p>PGMP006.EPS</p>	
<p>PARAMETER SETTINGS Temp: 135 °C Time: 7 min. Max accepted leak rate 0.19 psi / 10 min.</p>	

RAA141

Liquids must be processed with appropriate liquid programs only. Hazardous waste and explosive materials must not be processed in this sterilizer.

GETINGE
P3202

Program combination

<p>P1</p> <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h</p>
<p>P2</p> <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h</p>
<p>P3</p> <p>PGMP003.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h</p>
<p>P4</p> <p>PGMP002.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Ramps: 0.73 - 14.50 psi / min.</p>
<p>P5</p> <p>PGMP005.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Drying: 0 - 10 pulses</p>
<p>P6</p> <p>PGMP006.EPS</p>	<p>PARAMETER SETTINGS Temp: 135 °C Time: 7 min. Max accepted leak rate 0.19 psi / 10 min.</p>

RAA142

Liquids must be processed with appropriate liquid programs only. Explosive materials must not be processed in this sterilizer.

GETINGE
P3203

Program combination

<p>P1</p> <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Ramps: 50 - 1000 mbar / min.</p>
<p>P2</p> <p>PGMP003.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h</p>
<p>Automatic leak rate test</p> <p>P6</p> <p>PGMP006.EPS</p>	
<p>PARAMETER SETTINGS Temp: 135 °C Time: 7 min. Max accepted leak rate 13 mbar / 10 min.</p>	

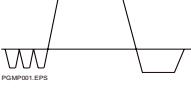
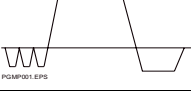

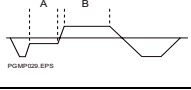
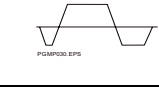

RAA125

Liquids must be processed with appropriate liquid programs only.

PROGRAM COMBINATION CHARTS

**GETINGE
P3220**

Program combination

Utensils, glassware, empty containers, textiles, plastic, rubber 		PARAMETER RANGES Prevac pulse: 1-99 Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h
Macrolon cages 		PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h
Liquids in open or vented containers 		PARAMETER SETTINGS Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h
Fodder 		PARAMETER RANGES Hold temp. (A): 50 - 100 °C Hold time (A): 0 min. - 99 h Hold temp. (B): 50 - 135 °C Hold time (B): 0 min. - 99 h Drying vacuum time: 0 min. - 99 h Drying slope: 50 - 1000 mbar / min.
Bedding 		PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Drying vacuum: 1 - 10 pulses
Automatic leak rate test 		PARAMETER SETTINGS Temp: 135 °C Time: 7 min. Max. accepted leak rate 13 mbar / 10 min.

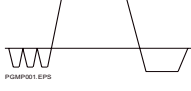
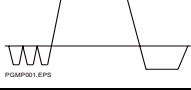
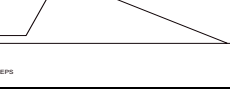
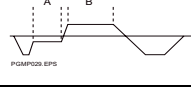
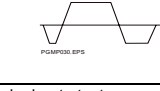

RAA015



Liquids must be processed with appropriate liquid programs only.
Hazardous waste must not be processed in this sterilizer.

**GETINGE
P3222**

Program combination

Utensils, glassware, macrolon cages, textiles, rubber 		PARAMETER RANGES Prevac pulse: 1 - 99 Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Ramps: 0.73 - 14.5 psi / min
Effluent 		PARAMETER RANGES Prevac pulse: 1 - 99 Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Ramps: 0.73 - 14.5 psi / min
Liquids in open or vented containers 		PARAMETER SETTINGS Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h
Animal feed 		PARAMETER RANGES Hold temp. (A): 50 - 100 °C Hold time (A): 0 min. - 99 h Hold temp. (B): 50 - 135 °C Hold time (B): 0 min. - 99 h Drying vacuum time: 0 min. - 99 h Drying ramp: 0.73 - 14.5 psi / min.
Bedding 		PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Drying vacuum: 1 - 10 pulses
Automatic leak rate test 		PARAMETER SETTINGS Temp: 135 °C Time: 7 min. Max. accepted leak rate 0.19 psi / 10 min.

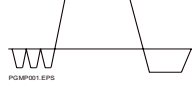

RAA146



Liquids must be processed with appropriate liquid programs only.
Explosive materials must not be processed in this sterilizer.

**GETINGE
P3223**

Program combination

Effluent 		PARAMETER RANGES Prevac pulse: 1 - 99 Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Ramps: 0.73 - 14.5 psi / min
Automatic leak rate test 		PARAMETER SETTINGS Temp: 135 °C Time: 7 min. Max. accepted leak rate 0.19 psi / 10 min.



Explosive materials must not be processed in this sterilizer.

PROGRAM COMBINATION CHARTS

GETINGE
L3200

Program combination

<p>Utensils / Textiles</p> <p>P1</p> <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h</p>
<p>Filter / Utensils</p> <p>P2</p> <p>PGMP002.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Slopes: 50 - 1000 mbar/ min.</p>
<p>Liquids in open or vented containers</p> <p>P3</p> <p>PGMP003.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h</p>
<p>Liquids in sealed containers Jacket cooling</p> <p>P4</p> <p>PGMP004.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Air cool press.: 1,5 - 3,5 bar(a) Cooling temp.:40 - 80 °C</p>
<p>Rubber stoppers</p> <p>P5</p> <p>PGMP005.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Drying: 0 - 10 pulses</p>
<p>Automatic leak rate test</p> <p>P6</p> <p>PGMP006.EPS</p>	<p>PARAMETER SETTINGS Temperature: 135 °C Time: 7 min. Max. accepted leak rate: 13 mbar / 10 min.</p>
<p>RA118 Liquids must be processed with appropriate liquid programs only. Hazardous waste must not be processed in this sterilizer.</p>	

GETINGE
L3202

Program combination

<p>Utensils / Textiles</p> <p>P1</p> <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h</p>
<p>Effluent</p> <p>P2</p> <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h</p>
<p>Liquids in open or vented containers</p> <p>P3</p> <p>PGMP003.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h</p>
<p>Liquids in sealed containers Jacket cooling</p> <p>P4</p> <p>PGMP004.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Air cool press.: 1,5 - 3,5 bar(a) Cooling temp.:40 - 80 °C</p>
<p>Rubber stoppers</p> <p>P5</p> <p>PGMP005.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Drying: 0 - 10 pulses</p>
<p>Automatic leak rate test</p> <p>P6</p> <p>PGMP006.EPS</p>	<p>PARAMETER SETTINGS Temperature: 135 °C Time: 7 min. Max. accepted leak rate: 13 mbar/10 min.</p>
<p>RA119 Liquids must be processed with appropriate liquid programs only. Explosive material must not be processed in this sterilizer.</p>	

GETINGE
L3203

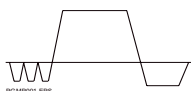
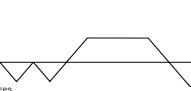
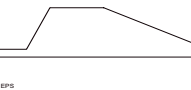



Program combination

<p>Utensils / Textiles (with effluent retention & sterilization)</p> <p>P1</p> <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h</p>
<p>Filter / Utensils (with effluent retention & sterilization)</p> <p>P2</p> <p>PGMP002.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Slopes: 50 - 1000 mbar/ min.</p>
<p>Liquids in open or vented containers (with effluent retention & sterilization)</p> <p>P3</p> <p>PGMP003.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h</p>
<p>Liquids in sealed containers (with effluent retention & sterilization) Jacket cooling</p> <p>P4</p> <p>PGMP004.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Air cool press.: 1,5 - 3,5 bar(a) Cooling temp.:40 - 80 °C</p>
<p>Rubber stoppers (with effluent retention & sterilization)</p> <p>P5</p> <p>PGMP005.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Drying: 0 - 10 pulses</p>
<p>Automatic leak rate test</p> <p>P6</p> <p>PGMP006.EPS</p>	<p>PARAMETER SETTINGS Temperature: 135 °C Time: 7 min. Max. accepted leak rate: 13 mbar / 10 min.</p>
<p>RA115 Liquids must be processed with appropriate liquid programs only. Explosive materials must not be processed in this sterilizer.</p>	

PROGRAM COMBINATION CHARTS

GETINGE
L3300

Program combination

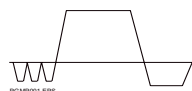
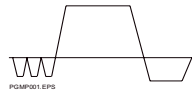
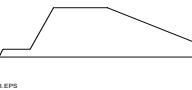



<p>Utensils / Textiles</p> <p>P1</p>  <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h</p>
<p>Filter / Utensils</p> <p>P2</p>  <p>PGMP002.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Slopes: 0.72 - 15.5 psi/ min.</p>
<p>Liquids in open or vented containers</p> <p>P3</p>  <p>PGMP003.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h</p>
<p>Liquids in sealed containers Fan assisted jacket cooling</p> <p>P4</p>  <p>PGMP004.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Air cool press.: 21.8 - 50.8 psi Cooling temp.: 40 - 80 °C</p>
<p>Rubber stoppers</p> <p>P5</p>  <p>PGMP005.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Drying: 0 - 10 pulses</p>
<p>Automatic leak rate test</p> <p>P6</p>  <p>PGMP006.EPS</p>	<p>PARAMETER SETTINGS Temperature: 135 °C Time: 7 min. Max accepted leak rate: 0.19 psi/10 min.</p>

RAA1125

! Liquids must be processed with appropriate liquid programs only.
Hazardous waste must not be processed in this sterilizer.

GETINGE
L3302

Program combination

<p>Utensils / Textiles</p> <p>P1</p>  <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h</p>
<p>Effluent</p> <p>P2</p>  <p>PGMP001.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h</p>
<p>Liquids in open or vented containers</p> <p>P3</p>  <p>PGMP003.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h</p>
<p>Liquids in sealed containers Fan assisted jacket cooling</p> <p>P4</p>  <p>PGMP004.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Air cool press.: 1.5 - 3.5 bar(a) Cooling temp.: 40 - 80 °C</p>
<p>Rubber stoppers</p> <p>P5</p>  <p>PGMP005.EPS</p>	<p>PARAMETER RANGES Sterilizing temp.: 105 - 135 °C Sterilizing time: 3 min. - 99 h Drying vacuum time: 0 min. - 99 h Drying: 0 - 10 pulses</p>
<p>Automatic leak rate test</p> <p>P6</p>  <p>PGMP006.EPS</p>	<p>PARAMETER SETTINGS Temperature: 135 °C Time: 7 min. Max accepted leak rate: 13 mbar/10 min.</p>

RAA1119

! Liquids must be processed with appropriate liquid programs only.
Explosive material must not be processed in this sterilizer.

Quality statement

Confidence in the Getinge group is the most important quality criterion. This must be the hallmark of all our external and internal commitments, activities and products. Products and services supplied by Getinge must conform to the agreed terms and expectations to ensure recommendations for further business. The achievement of these quality goals is the basis for continued competitive and successful enterprise.

- Sterilizer Qualification & Functional Test. Getinge fully tests each sterilizer to stringent standards developed from years of experience within the pharmaceutical and health care industries. Both European and North American standards as well as other international standards are met during engineering, construction, and factory testing. An internal audit protocol has been developed to match the model and the intended use of the equipment. Every sterilizer must meet these testing criteria and is documented as such. This documentation can be provided to the customer if requested. This documentation is stored at our facility for the lifetime of the sterilizer.

DOCUMENTATION

Three(3) copies of manuals are provided. Operator- and service manuals are in selected language. Other manuals in English. Manuals include electrical and piping diagram.

- Vendor data sheets. Vendor data sheets for major components will be provided

- Pre-Qualification. The pre-qualification protocol is developed to verify that the unit performs as defined in the specifications. This protocol is conducted at the manufacturing site following completion of the build and final testing phase of the unit's production. The documentation provides for verification that the unit and all corresponding components and control systems are functional and react in a reproducible manner. Pre-programmed phases, alarms, CPU time, safety features and inputs/outputs are challenged to ensure proper operation. All testing is done utilizing an empty chamber and multiple independent measurement devices. The protocol defines all procedures, acceptance criteria, expected responses and documentation of actual responses.

PACKING FOR SHIPMENT

All equipment is prepared for sea worthy freight in air tight plastic wrap to prevent moisture damage, and fully enclosed wooden crates to prevent physical damage. Units can be shipped in multiple crates to facilitate ingress. Please refer to equipment drawings for the respective dimensions.

FACTORY ACCEPTANCE TESTING

FAT: Testing or inspection of sterilizer performed at factory. There are three levels,

- Fat 00, Factory inspection without any documents. One Engineer for customer disposal for 2 days.
- Fat 01, Factory inspection including GAT (Getinge Acceptance test protocol) documents.
- Fat 05, as FAT01 but extended with temperature distribution mapping for Max 5 cycles.

LOADING EQUIPMENT

Loading equipment is available to meet different loading and ergonomic requirements of the user. All major shelf components of the loading equipment is made of acid proof 316 electropolished stainless steel. If a loading trolley is selected, the frame and rail plates are made of stainless steel (304 or equal), with an electropolished surface. The wheels of the loading trolley have bearings, holders and soft poly-urethane wheels. (See individual datasheets for details)

Note: When selecting from the available loading equipment options, selections can only be made from one table. For example, if “Extendable Shelves Light” has been selected, you should not choose a “Shelf Rack” from the “Trolley, Shelf Rack and Shelves” table.

A loading trolley can take up to 350 kg (770 lbs) load, depending on the installation and conditions.

A shelf rack can take a maximum of 300 kg distributed load (660 lbs), including the optional shelves used.



A shelf can take up to 125 kg (275 lbs) distributed load.



The bottom shelf is included with the rack.



Shelf Rails (internal) Trolley Shelf rack

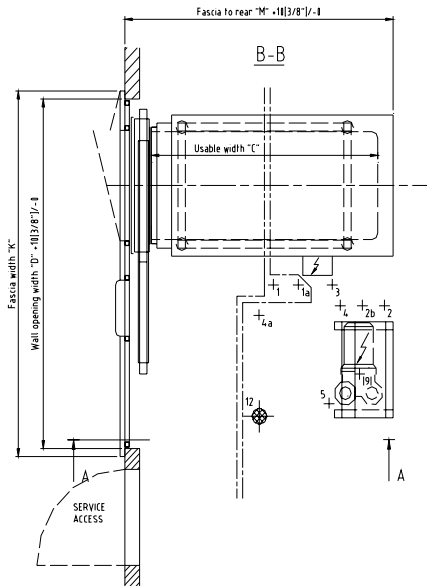
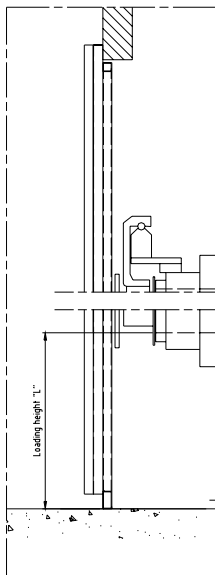
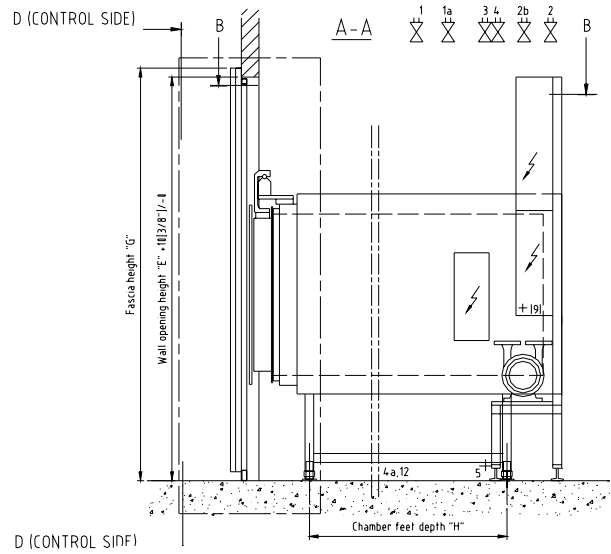
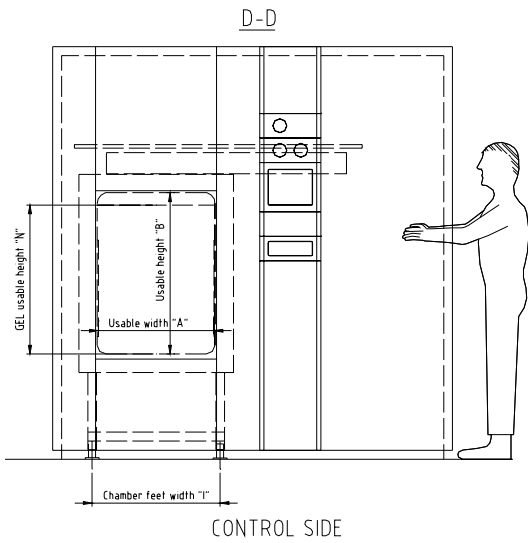
GE/GEL 6910 Series		
Loading system with shelf rack		Qty
<input type="checkbox"/> Rails for shelf rack 6910-1	564620270	
<input type="checkbox"/> Rails for shelf rack 6910-2	564621270	
<input type="checkbox"/> Shelf rack heavy load	564625270	
<input type="checkbox"/> Shelf for heavy load	564626270	
<input type="checkbox"/> Loading trolley fixed	564624270	

GE/GEL 6913 series		
Loading system with shelf rack		Qty
<input type="checkbox"/> Rails for shelf rack 6913-1	564620470	
<input type="checkbox"/> Rails for shelf rack 6913-2	564621470	
<input type="checkbox"/> Shelf rack heavy load	564625470	
<input type="checkbox"/> Shelf for heavy load	564626470	
<input type="checkbox"/> Loading trolley fixed	564624470	

GE/GEL 6915 series		
Loading system with shelf rack		Qty
<input type="checkbox"/> Rails for shelf rack 6915-1	564620570	
<input type="checkbox"/> Rails for shelf rack 6915-2	564621570	
<input type="checkbox"/> Shelf rack heavy load	564625570	
<input type="checkbox"/> Shelf for heavy load	564626570	
<input type="checkbox"/> Shelf rack heavy load, divided	564625970	
<input type="checkbox"/> Pair of shelves for heavy load	564626970	
<input type="checkbox"/> Loading trolley fixed	564624570	

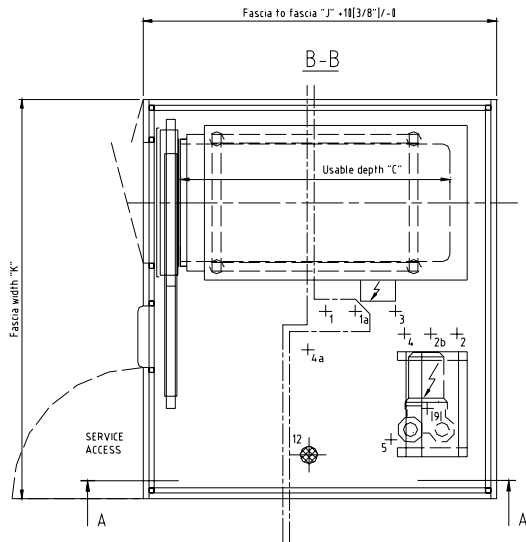
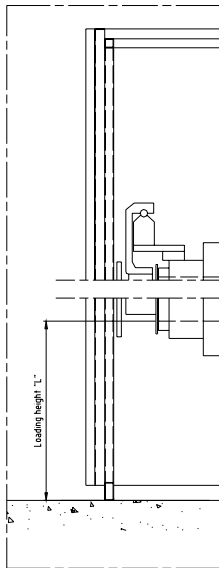
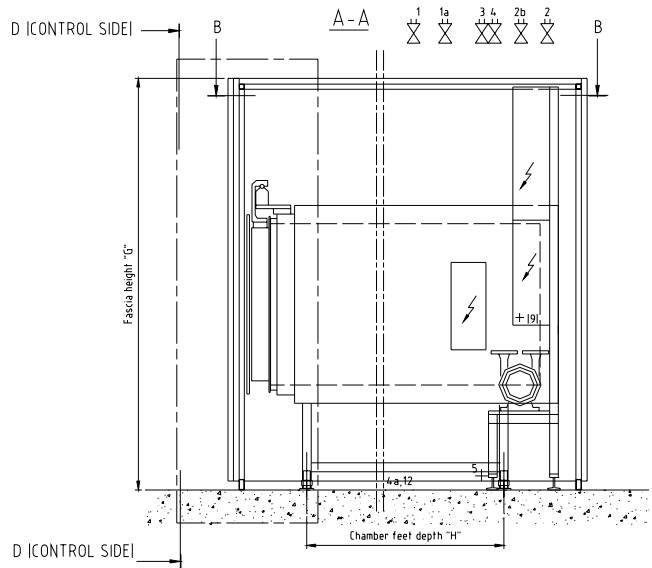
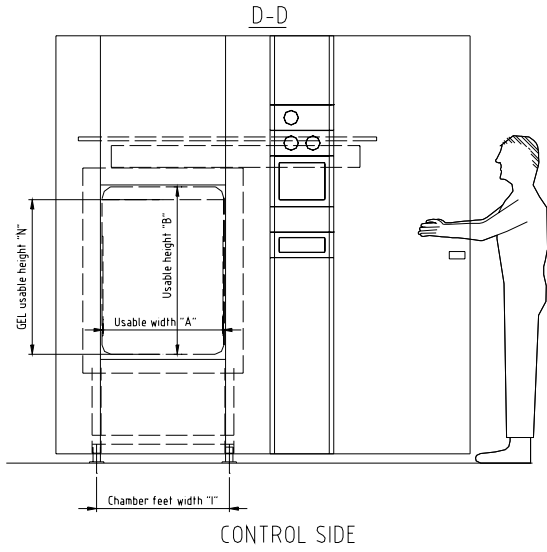
GE/GEL 6917 series		
Loading system with shelf rack		Qty
<input type="checkbox"/> Rails for shelf rack 6917-1	564620670	
<input type="checkbox"/> Rails for shelf rack 6917-2	564621670	
<input type="checkbox"/> Shelf rack heavy load, x2 for full load	564625670	
<input type="checkbox"/> Shelf for heavy load, x2 for full load	564626670	
<input type="checkbox"/> Loading trolley fixed, x2 for full load	564624170	

SINGLE DOOR MODELS



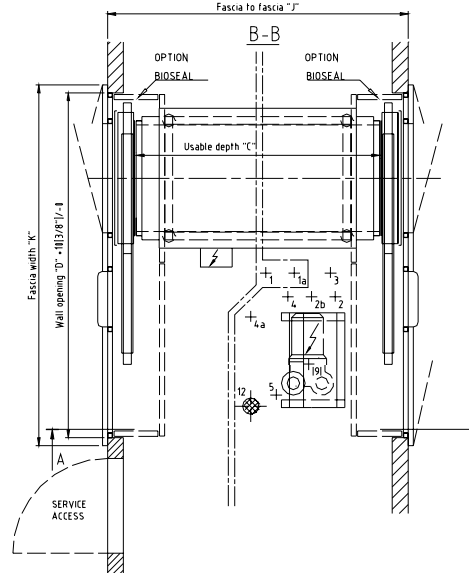
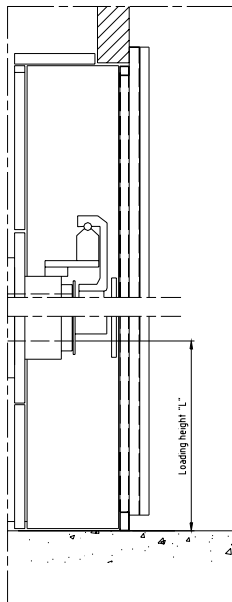
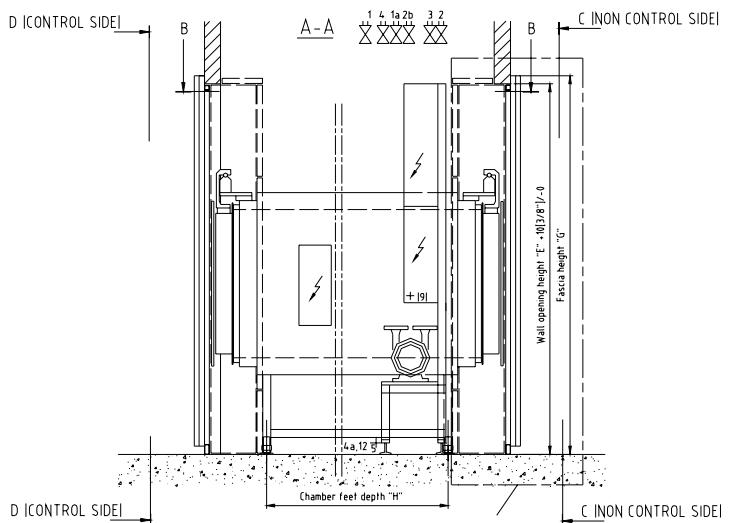
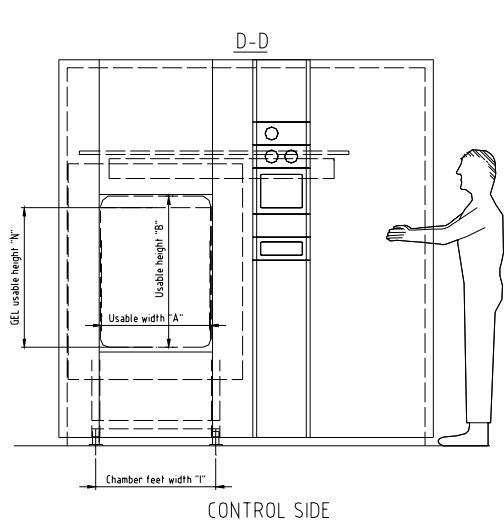
Dimensions		Recessed Model				Notes
		GE 6910 AR1	GE 6913 AR1	GE 6915 AR1	GE 6917 AR1	
A	Usable internal chamber width	660 mm	660 mm	660 mm	660 mm	
B	Usable internal chamber height	920 mm	920 mm	920 mm	920 mm	
C	Usable internal chamber depth	1000 mm	1350 mm	1540 mm	1700 mm	
D	Wall opening (width)	2180 mm	2180 mm	2180 mm	2180 mm	Rec. model only
E	Wall opening (height)	2300 mm	2300 mm	2300 mm	2300 mm	Rec. model only
G	Fascia height	2350 mm	2350 mm	2350 mm	2350 mm	
H	Chamber feet (depth)					
I	Chamber feet (width)	730 mm	730 mm	730 mm	730 mm	
J	Fascia to fascia depth	n/a	n/a	n/a	n/a	
K	Fascia width	2280 mm	2280 mm	2280 mm	2280 mm	Rec./Cab. different
L	Loading height	600 mm	600 mm	600 mm	600 mm	
M	Fascia to rear depth	1285 mm	1635 mm	1825 mm	1985 mm	Rec. model only
N	GEL usable internal chamber height	850 mm	850 mm	850 mm	850 mm	
	Sterilizer net weight	770 kg	870 kg	970 kg	1070 kg	
	By hydrostatic test	1600 kg	1900 kg	2150 kg	2400 kg	
Getinge stand. layout drawing:		5665684				Available on request

DOUBLE DOOR MODELS



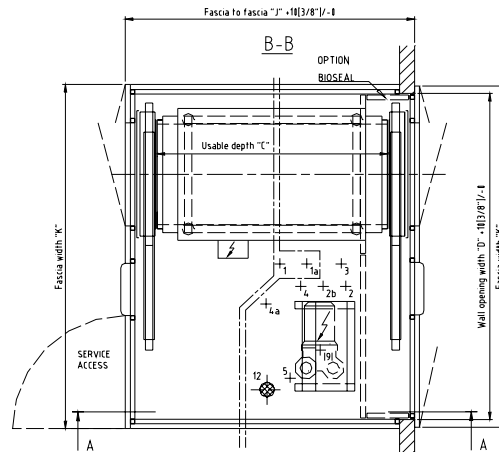
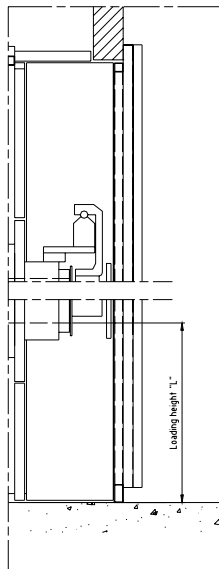
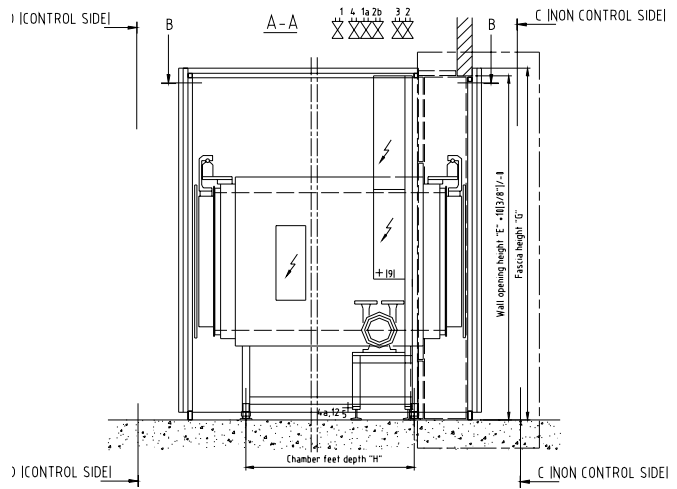
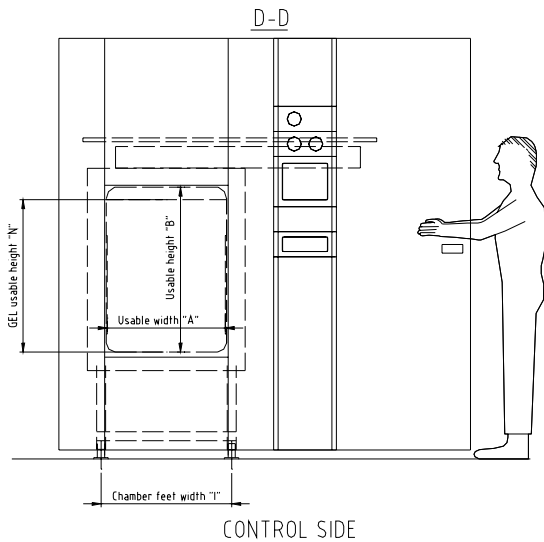
Dimensions	Cabinet Model				Notes
	GE 6910 AC1	GE 6913 AC1	GE 6915 AC1	GE 6917 AC1	
A Usable internal chamber width	660 mm	660 mm	660 mm	660 mm	
B Usable internal chamber height	920 mm	920 mm	920 mm	920 mm	
C Usable internal chamber depth	1000 mm	1350 mm	1540 mm	1700 mm	
D Wall opening (width)	n/a	n/a	n/a	n/a	Rec. model only
E Wall opening (height)	n/a	n/a	n/a	n/a	Rec. model only
G Fascia height	2350 mm	2350 mm	2350 mm	2350 mm	
H Chamber feet (depth)					
I Chamber feet (width)	730 mm	730 mm	730 mm	730 mm	
J Fascia to fascia depth	1414 mm	1764 mm	1954 mm	2114 mm	Cab. model only
K Fascia width	mm	2280 mm	2280 mm	2280 mm	Rec./Cab. different
L Loading height	mm	600 mm	600 mm	600 mm	
M Fascia to rear depth	n/a	n/a	n/a	n/a	Rec. model only
N GEL usable internal chamber height	850 mm	850 mm	850 mm	850 mm	
Sterilizer net weight	770 kg	870 kg	970 kg	1070 kg	
By hydrostatic test	1600 kg	1900 kg	2150 kg	2400 kg	
Getting stand. layout drawing:		5665685			Available on request

DOUBLE DOOR MODELS



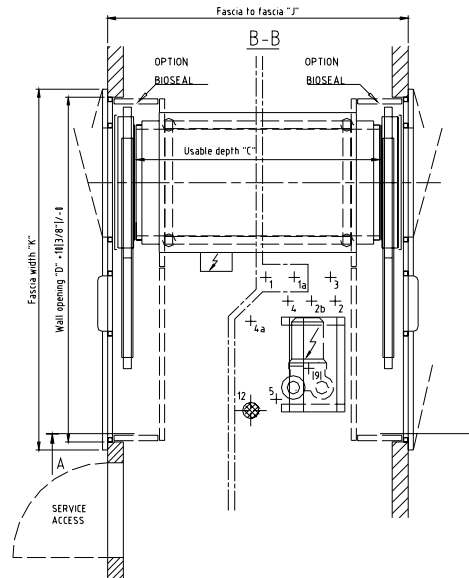
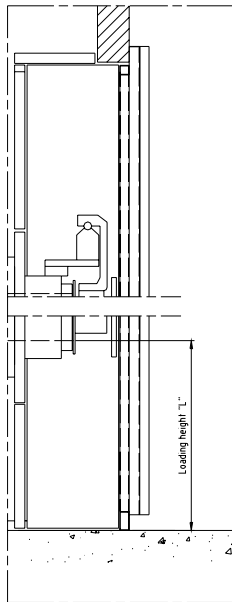
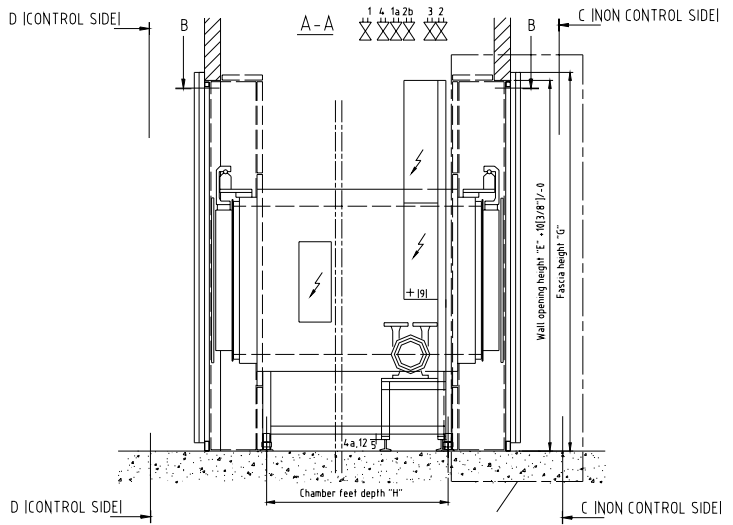
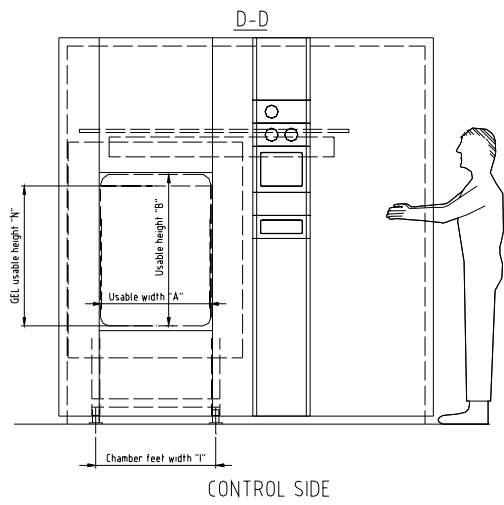
Dimensions	Recessed Model				Notes
	GE 6910 AR2	GE 6913 AR2	GE 6915 AR2	GE 6917 AR2	
A Usable internal chamber width	660 mm	660 mm	660 mm	660 mm	
B Usable internal chamber height	920 mm	920 mm	920 mm	920 mm	
C Usable internal chamber depth	1000 mm	1350 mm	1540 mm	1700 mm	
D Wall opening (width)	2180 mm	2180 mm	2180 mm	2180 mm	Rec. model only
E Wall opening (height)	2300mm	2300 mm	2300 mm	2300 mm	Rec. model only
G Fascia height	2350 mm	2350 mm	2350 mm	2350 mm	
H Chamber feet (depth)	596 mm	946 mm	1136 mm	1296 mm	
I Chamber feet (width)	730 mm	730 mm	730 mm	730 mm	
J Fascia to fascia depth	1360 mm	1710 mm	1900 mm	2060 mm	Rec. model only
K Fascia width	2280 mm	2280 mm	2280 mm	2280 mm	Rec./Cab. different
L Loading height	600 mm	600 mm	600 mm	600 mm	
M Fascia to rear depth	n/a	n/a	n/a	n/a	Rec. model only
N GEL usable internal chamber height	850 mm	850 mm	850 mm	850 mm	
Sterilizer net weight	950 kg	1050 kg	1150 kg	1250 kg	
By hydrostatic test	1600 kg	1900 kg	2150 kg	2400 kg	
Getinge stand. layout drawing:	5665686				Available on request

DOUBLE DOOR MODELS



Dimensions	Cabinet Model				Notes
	GE 6910 ARC2	GE 6913 ARC2	GE 6915 ARC2	GE 6917 ARC2	
A Usable internal chamber width	660 mm	660 mm	660 mm	660 mm	
B Usable internal chamber height	920 mm	920 mm	920 mm	920 mm	
C Usable internal chamber depth	1000 mm	1350 mm	1540 mm	1700 mm	
D Wall opening (width)	2180 mm	2180 mm	2180 mm	2180 mm	
E Wall opening (height)	2300 mm	2300 mm	2300 mm	2300 mm	
G Fascia height	2350 mm	2350 mm	2350 mm	2350 mm	
H Chamber feet (depth)					
I Chamber feet (width)	730 mm	730 mm	730 mm	730 mm	
J Fascia to fascia depth	1360 mm	1710 mm	1900 mm	2060 mm	
K Fascia width	2300 mm	2300 mm	2300 mm	2300 mm	Rec./Cab. different
L Loading height	600 mm	600 mm	600 mm	600 mm	
M Fascia to rear depth	n/a	n/a	n/a	n/a	Rec. model only
N GEL usable internal chamber height	850 mm	850 mm	850 mm	850 mm	
Sterilizer net weight	950 kg	1050 kg	1150 kg	1250 kg	
By hydrostatic test	1600 kg	1900 kg	2150 kg	2400 kg	
Getinge stand. layout drawing:	5665713				Available on request

DOUBLE DOOR MODELS



Dimensions		Recessed Model				Notes
		GE 6910 ARB2	GE 6913 ARB2	GE 6915 ARB2	GE 6917 ARB2	
A	Usable internal chamber width	660 mm	660 mm	660 mm	660 mm	
B	Usable internal chamber height	920 mm	920 mm	920 mm	920 mm	
C	Usable internal chamber depth	1000 mm	1350 mm	1540 mm	1700 mm	
D	Wall opening (width)	2180 mm	2180 mm	2180 mm	2180 mm	Rec. model only
E	Wall opening (height)	2300 mm	2300 mm	2300 mm	2300 mm	Rec. model only
G	Fascia height	2350 mm	2350 mm	2350 mm	2350 mm	
H	Chamber feet (depth)	596 mm	946 mm	1136 mm	1296 mm	
I	Chamber feet (width)	730 mm	730 mm	730 mm	730 mm	
J	Fascia to fascia depth	1360 mm	1710 mm	1900 mm	2060 mm	Rec. model only
K	Fascia width	2280 mm	2280 mm	2280 mm	2280 mm	Rec./Cab. different
L	Loading height	600 mm	600 mm	600 mm	600 mm	
M	Fascia to rear depth					Rec. model only
N	GEL usable internal chamber height	850 mm	850 mm	850 mm	850 mm	
	Sterilizer net weight	950 kg	1050 kg	1150 kg	1250 kg	
	By hydrostatic test	1600 kg	1900 kg	2150 kg	2400 kg	
Getinge stand. layout drawing:		5665686				Available on request

INGRESS DIMENSIONS

Ingress Dimensions						
			W (mm)	H (mm)	D (mm)	
GE 6910	AR1	Assembled	1400	2070	1285	
		Disassembled	1100	1770	1285	
	AC1	Assembled	1400	2070	1480	
		Disassembled	1100	1770	1480	
	AR2	Assembled	1400	2070	1360	
		Disassembled	1100	1770	1360	
	ARC2	Assembled	1400	2070	1293	
		Disassembled	1100	1770	1293	
	ARB2	Assembled	1400	2070	1360	
		Disassembled	1100	1770	1360	
	GE 6913	AR1	Assembled	1400	2070	1635
			Disassembled	1100	1770	1635
AC1		Assembled	1400	2070	1830	
		Disassembled	1100	1770	1830	
AR2		Assembled	1400	2070	1710	
		Disassembled	1100	1770	1710	
ARC2		Assembled	1400	2070	1643	
		Disassembled	1100	1770	1643	
ARB2		Assembled	1400	2070	1710	
		Disassembled	1100	1770	1710	
GE 6915		AR1	Assembled	1400	2070	1825
			Disassembled	1100	1770	1825
	AC1	Assembled	1400	2070	2020	
		Disassembled	1100	1770	2020	
	AR2	Assembled	1400	2070	1900	
		Disassembled	1100	1770	1900	
	ARC2	Assembled	1400	2070	1833	
		Disassembled	1100	1770	1833	
	ARB2	Assembled	1400	2070	1900	
		Disassembled	1100	1770	1900	
	GE 6917	AR1	Assembled	1400	2070	1985
			Disassembled	1100	1770	1985
AC1		Assembled	1400	2070	2180	
		Disassembled	1100	1770	2180	
AR2		Assembled	1400	2070	2060	
		Disassembled	1100	1770	2060	
ARC2		Assembled	1400	2070	1993	
		Disassembled	1100	1770	1993	
ARB2		Assembled	1400	2070	2060	
		Disassembled	1100	1770	2060	

UTILITY DATA

Autoclave	GE 6910 / 6913 / 6915 / 6917			
Electricity	Units	Type		
		1	2	3
Voltage, 3-phase	VAC	200	230	400
Frequency	Hz	50	50	50
Recommended fuse	Ampere	35	25	25
Power	kW	2.2	2.2	2.2

Autoclave	GE		
Emissions	Loading area	Unloading area	Service area
Heat emission			
Unit	kW	kW	kW
GE 6910	0.5	0.5	1.9
GE 6913	0.5	0.5	2.4
GE 6915	0.5	0.5	3.00
GE 6917	0.5	0.5	3.3
Sound level			
Unit	dBa	dBa	dBa
	<70	<70	<70

UTILITY DATA

The media consumption is highly dependent on the density and nature of the load. If the sample loads, are dissimilar to those you will be processing, please ask your Getinge representative for a new calculation based on your specific conditions.

Note: This is an estimate only. Depending on the final configuration, values may change.

(Common): Used when single media.

* : Alternative configuration.

Before installation, please refer to the Getinge Scientific Installation Manual.

Usage is based on laws of physical science and are load dependent. Values for specific loads and/or cycles can be supplied upon request.

Utility data for P322X is available on request.

1.

1.1 GE 6910

- 1.1.1 P3100 / P3101. The utility requirements are based on a typical load of 119 kg Utensils acc to DIN 98 546.
- 1.1.2 P3200 / P3201 / P3202 / P3203. The utility requirements are based on a liquid load of 31 liter in 0.5 liter open glass bottles. This equals appr. 1/4 of a full load.
- 1.1.3 L3200 / L3203 / L3300 / L3303. The utility requirements are based on a liquid load of 62 liter in 0.5 liter open glass bottles. This equals appr. 1/2 of a full load.

1.2 **GE 6913**

- 1.2.1 P3100/P3101. The utility requirements are based on a typical load of 144 kg. Utensils acc to DIN 98 546.
- 1.2.2 P3200/P3201/P3202/P3203. The utility requirements are based on a liquid load of 39 liter in 0.5 liter open glass bottles. This equals appr. 1/4 of a full load.
- 1.2.3 L3200/L3203/L3300/L3303. The utility requirements are based on a liquid load of 77 liter in 0.5 liter open glass bottles. This equals appr. 1/2 of a full load.

1.3 **GE 6915**

- 1.3.1 P3100/P3101. The utility requirements are based on a typical load of 192 kg. Utensils acc to DIN 98 546.
- 1.3.2 P3200/P3201/P3202/P3203. The utility requirements are based on a liquid load of 48 liter in 0.5 liter open glass bottles. This equals appr. 1/4 of a full load.
- 1.3.3 L3200/L3203/L3300/L3303. The utility requirements are based on a liquid load of 95 liter in 0.5 liter open glass bottles. This equals appr. 1/2 of a full load.

1.4 **GE 6917**

- 1.4.1 P3100/P3101. The utility requirements are based on a typical load of 213 kg. Utensils acc to DIN 98 546.
- 1.4.2 P3200/P3201/P3202/P3203. The utility requirements are based on a liquid load of 53 liter in 0.5 liter open glass bottles. This equals appr. 1/4 of a full load.
- 1.4.3 L3200/L3203. The utility requirements are based on a liquid load of 59 liter in 0.5 liter open glass bottles. This equals appr. 1/2 of a full load.

For P322X an SCDL option is available for water, pump water and instrument air.

Autoclave		Water	Pump Water	Instrument air
Connection size (2,3)		1 Thread	1 Thread	1/2 Thread
Range		4.0-6.0 bar	4.0-6.0 bar	4.0-5.0 bar
Unit		liter	liter	Nm3
GE 690 series	Use / Cycle	250	60	0.6
	Peak / minute	100	100	0.6

2. The sizes stated refer to the connections on the sterilizer.

- US: Thread according to NPT
Flange according to ANSI / 150 lb
TC-clamp according to ISO 2852
- Japan: Thread according to ISO 7/1
Flange according to JIS / 10K
TC-clamp according to ISO 2852
- Other Regions: Thread according to ISO 7/1
Flange according to DIN2632 / PN 10
TC-clamp according to ISO 2852

- 3. Drain connections should be piped to the floor drain with an air gap equal to a minimum distance of 2x the pipe diameter. Multiple outlet connections shall be piped separately from the sterilizer to the floor drain.
- 4. Cold water requirements are based on a maximum water temperature of 15°C [60°F]. Circulating cooling water requirements is based on a full flow throughout the process with a specified temperature rise of max 40°C [72°F] and a pressure drop (dP) of min 1 bar [14,5 psi], requirements for other demands can be provided upon request.
- 5. An optional steam generator may be available for installations where steam is not available. See separate data sheet for requirements.
- 6. Electrical Systems:
 - TN-S Neutral point connected to earth. N and P separated.
 - TN-C Neutral point connected to Earth. N and P combined.
 - IT- System isolated from earth or connected through an impedance.
 - TT-Neautrl Point connected to earth. Exposed parts connected to separate earth electrodes.
- 7. Heat emissions is defined as heat released to a room temperature of 20°C [68°F]. Sterilizer doors are closed.
- 8. Sound level measured 1 meter from equipment according to dBa definition 7/8

GE 6910

Autoclave	GE 6910			
Program (1)	P3100 / P3101	P3200 / P3201 / P3202 / P3203	L3200 / L3203	L3300 / L3303
Steam (common) @ 2.7-3.0 bar (4,5), single steam supply to the unit				
Connection size (2,3)	3/4 Thread	3/4 Thread	1/2 Thread	1/2 Thread
Unit	kg	kg	kg	kg
Use / cycle	19	23	31	31
Peak / minute	1.2	1.8	2.5	0.8
Non process steam @ 2.7-3.0 bar (4,5), steam excluding process steam				
Connection size (2,3)	1/2 Thread	1/2 Thread	1/2 Thread	1/2 Thread
Unit	kg	kg	kg	kg
Use / cycle	6	6	6	6
Peak / minute	0.6	0.6	0.6	0.6
Process steam @ 2.7-3.0 bar (4,5), steam to chamber & gasket				
Connection size (2,3)	1 TC	1 TC	1 TC	1 TC
Unit	kg	kg	kg	kg
Use / cycle	13	17	25	25
Peak / minute	1.1	1.6	2.3	0.8
Water (common) @ 4.0-6.0 bar (4,5), single water supply to the unit				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Use / cycle	310	220	890	890
Peak / minute	42	42	42	42
Pump water @ 4.0-6.0 bar (4,5), water ring water to vacuumpump (only GE(L))				
Connection size (2,3)	1/2 Thread	1/2 Thread	1/2 Thread	1/2 Thread
Unit	liter	liter	liter	liter
Use / cycle	30	30	30	30
Peak / minute	10	10	10	10
Jacket water @ 4.0-6.0 bar (4,5), water used to jacket cooling (only L-programs)				
Connection size (2,3)	n/a	n/a	1/2 Thread	1/2 Thread
Unit	liter	liter	liter	liter
Use / cycle	n/a	n/a	670	670
Peak / minute	n/a	n/a	14	14
Cooling water @ 4.0-6.0 bar (4,5), water used indirectly for cooling				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Use / cycle	280	190	190	32
Peak / cycle	32	32	32	20
Circulating cooling water @ 2.0-3.0 bar (4,5), circulating water (chilled water) used indirectly for cooling				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Use / cycle	1430	1910	5710	3810
Peak / minute	32	32	32	32
Cooling water return (4,5), closed return from circulating cooling water				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Use / cycle	1430	1910	5710	3810
Peak / minute	32	32	32	32
Condensate return (4,5), non process wetted condensate				
Connection size	1/2 Thread	1/2 Thread	1/2 Thread	1/2 Thread
Instrument air @ 6.0-8.0 bar (4,5), compressed air to pilot valves, pneum motors				
Connection size (2,3)	1/4 Thread	1/4 Thread	n/a	n/a
Unit	Nm ³	Nm ³	Nm ³	Nm ³
Use / cycle	0.4	0.4	n/a	n/a
Peak / minute	0.2	0.2	n/a	n/a
Compressed air (common) @ 6.0-8.0 bar (4,5), single compressed air supply to the unit				
Connection size (2,3)	n/a	n/a	1/2 Thread	1/2 Thread
Unit	Nm ³	Nm ³	Nm ³	Nm ³
Use / cycle	n/a	n/a	2.3	2.3
Peak / minute	n/a	n/a	0.8	0.8
Drain (4,5), outlet from unit excluding cooling water				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Peak / minute	20	20	50	50
Drain (4,5), outlet from unit including cooling water				
Connection size (2,3)	1 Thread	1 Thread	1 Thread	1 Thread
Unit	liter	liter	liter	liter
Peak / minute	50	50	50	50
Floor drain air break (4,5), drain gutter with air gap in building				
Getinge drawing				
	T214	T238	T273	T297

GE 6913

Autoclave	GE 6913			
Program (1)	P3100 / P3101	P3200 / P3201 / P3202 / P3203	L3200 / L3203	L3300 / 3303
Steam (common) @ 2.7-3.0 bar (4,5), single steam supply to the unit				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	kg	kg	kg	kg
Use / cycle	23	28	40	40
Peak / minute	1.3	2	3	1
Non process steam @ 2.7-3.0 bar (4,5), steam excluding process steam				
Connection size (2,3)	1/2 Thread	1/2 Thread	1/2 Thread	1/2 Thread
Unit	kg	kg	kg	kg
Use / cycle	8	8	9	9
Peak / minute	0.8	0.8	0.9	0.9
Process steam @ 2.7-3.0 bar (4,5), steam to chamber & gasket				
Connection size (2,3)	1 TC	1 TC	1 TC	1 TC
Unit	kg	kg	kg	kg
Use / cycle	14	19	31	31
Peak / minute	1.2	1.8	2.8	0.9
Water (common) @ 4.0-6.0 bar (4,5), single water supply to the unit				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Use / cycle	310	260	1070	1070
Peak / minute	42	42	42	42
Pump water @ 4.0-6.0 bar (4,5), water ring water to vacuum pump (only GE(L))				
Connection size (2,3)	1/2 Thread	1/2 Thread	1/2 Thread	1/2 Thread
Unit	liter	liter	liter	liter
Use / cycle	30	30	30	30
Peak / minute	10	10	10	10
Jacket water @ 4.0-6.0 bar (4,5), water used to jacket cooling (only L-programs)				
Connection size (2,3)	n/a	n/a	1/2 Thread	1/2 Thread
Unit	liter	liter	liter	liter
Use / cycle	n/a	n/a	840	840
Peak / minute	n/a	n/a	21	21
Cooling water @ 4.0-6.0 bar (4,5), water used indirectly for cooling				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Use / cycle	280	230	200	200
Peak / cycle	32	32	32	32
Circulating cooling water @ 2.0-3.0 bar (4,5), circulating water (chilled water) used indirectly for cooling				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Use / cycle	1430	1910	5710	3810
Peak / minute	32	32	32	32
Cooling water return (4,5), closed return from circulating cooling water				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Use / cycle	1430	1910	5710	3810
Peak / minute	32	32	32	32
Condensate return (4,5), non process wetted condensate				
Connection size	1/2 Thread	1/2 Thread	1/2 Thread	1/2 Thread
Instrument air @ 6.0-8.0 bar (4,5), compressed air to pilot valves, pneum motors				
Connection size (2,3)	1/4 Thread	1/4 Thread	n/a	n/a
Unit	Nm ³	Nm ³	Nm ³	Nm ³
Use / cycle	0.4	0.4	n/a	n/a
Peak / minute	0.2	0.2	n/a	n/a
Compressed air (common) @ 6.0-8.0 bar (4,5), single compressed air supply to the unit				
Connection size (2,3)	n/a	n/a	1/2 Thread	1/2 Thread
Unit	Nm ³	Nm ³	Nm ³	Nm ³
Use / cycle	n/a	n/a	2.9	2.9
Peak / minute	n/a	n/a	1	1
Drain (4,5), outlet from unit excluding cooling water				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Peak / minute	20	20	50	50
Drain (4,5), outlet from unit including cooling water				
Connection size (2,3)	1 Thread	1 Thread	1 Thread	1 Thread
Unit	liter	liter	liter	liter
Peak / minute	50	50	50	50
Floor drain air break (4,5), drain gutter with air gap in building				
Getinge drawing				
	T215	T239	T274	T298

GE 6913

Autoclave	GE 6915			
Program (1)	P3100 / P3101	P3200 / P3201 / P3202 / P3203	L3200 / L3203	L3300 / L3303
Steam (common) @ 2.7-3.0 bar (4,5), single steam supply to the unit				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	kg	kg	kg	kg
Use / cycle	32	38	50	50
Peak / minute	1.7	2.3	3.4	1.7
Non process steam @ 2.7-3.0 bar (4,5), steam excluding process steam				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	kg	kg	kg	kg
Use / cycle	16	16	16	16
Peak / minute	1.6	1.6	1.6	1.6
Process steam @ 2.7-3.0 bar (4,5), steam to chamber & gasket				
Connection size (2,3)	1 TC	1 TC	1 TC	1 TC
Unit	kg	kg	kg	kg
Use / cycle	16	22	34	34
Peak / minute	1.3	2.1	3.1	1
Water (common) @ 4.0-6.0 bar (4,5), single water supply to the unit				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Use / cycle	310	350	1340	1340
Peak / minute	42	42	42	42
Pump water @ 4.0-6.0 bar (4,5), water ring water to vacuum pump (only GE(L))				
Connection size (2,3)	1/2 Thread	1/2 Thread	1/2 Thread	1/2 Thread
Unit	liter	liter	liter	liter
Use / cycle	30	30	30	30
Peak / minute	10	10	10	10
Jacket water @ 4.0-6.0 bar (4,5), water used to jacket cooling (only L-programs)				
Connection size (2,3)	n/a	n/a	1/2 Thread	1/2 Thread
Unit	liter	liter	liter	liter
Use / cycle	n/a	n/a	1100	1100
Peak / minute	n/a	n/a	18	35
Cooling water @ 4.0-6.0 bar (4,5), water used indirectly for cooling				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Use / cycle	280	320	210	210
Peak / cycle	32	32	32	32
Circulating cooling water @ 2.0-3.0 bar (4,5), circulating water (chilled water) used indirectly for cooling				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Use / cycle	1430	1910	5710	3810
Peak / minute	32	32	32	32
Cooling water return (4,5), closed return from circulating cooling water				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Use / cycle	1430	1910	5710	3810
Peak / minute	32	32	32	32
Condensate return (4,5), non process wetted condensate				
Connection size	1/2 Thread	1/2 Thread	1/2 Thread	1/2 Thread
Instrument air @ 6.0-8.0 bar (4,5), compressed air to pilot valves, pneum motors				
Connection size (2,3)	1/4 Thread	1/4 Thread	n/a	n/a
Unit	Nm ³	Nm ³	Nm ³	Nm ³
Use / cycle	0.4	0.4	n/a	n/a
Peak / minute	0.2	0.2	n/a	n/a
Compressed air (common) @ 6.0-8.0 bar (4,5), single compressed air supply to the unit				
Connection size (2,3)	n/a	n/a	1/2 Thread	1/2 Thread
Unit	Nm ³	Nm ³	Nm ³	Nm ³
Use / cycle	n/a	n/a	3.3	3.3
Peak / minute	n/a	n/a	1.2	1.2
Drain (4,5), outlet from unit excluding cooling water				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	3/4 Thread
Unit	liter	liter	liter	liter
Peak / minute	20	20	50	50
Drain (4,5), outlet from unit including cooling water				
Connection size (2,3)	1 Thread	1 Thread	1 Thread	1 Thread
Unit	liter	liter	liter	liter
Peak / minute	50	50	50	50
Floor drain air break (4,5), drain gutter with air gap in building				
Getinge drawing				
	T216	T240	T275	T299

GE 6917

Autoclave	GE 6917			
Program (1)	P3100 / P3101	P3200 / P3201 / P3202 / P3203	L3200 / L3203	L3300 / L3303
Steam (common) @ 40-45 psi (2.7-3.0 bar) (4,5), single steam supply to the unit				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	n/a
Unit	kg	kg	kg	kg
Use / cycle	35	42	56	n/a
Peak / minute	2	2.4	3.7	n/a
Non process steam @ 40-45 psi (2.7-3.0 bar) (4,5), steam excluding process steam				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	n/a
Unit	kg	kg	kg	kg
Use / cycle	18	18	18	n/a
Peak / minute	1.8	1.8	1.8	n/a
Process steam @ 40-45 psi (2.7-3.0 bar) (4,5), steam to chamber & gasket				
Connection size (2,3)	1 TC	1 TC	1 TC	n/a
Unit	kg	kg	kg	kg
Use / cycle	17	24	37	n/a
Peak / minute	1.3	2.2	3.3	n/a
Water (common) @ 60-85 (4.0-6.0 bar) (4,5), single water supply to the unit				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	n/a
Unit	liter	liter	liter	liter
Use / cycle	310	380	1450	n/a
Peak / minute	42	42	42	n/a
Pump water @ 60-85 (4.0-6.0 bar) (4,5), water ring water to vacuumpump (only GE(L))				
Connection size (2,3)	1/2 Thread	1/2 Thread	1/2 Thread	n/a
Unit	liter	liter	liter	liter
Use / cycle	30	30	30	n/a
Peak / minute	10	10	10	n/a
Jacket water @ 60-85 (4.0-6.0 bar) (4,5), water used to jacket cooling (only L-programs)				
Connection size (2,3)	n/a	n/a	1/2 Thread	n/a
Unit	liter	liter	liter	liter
Use / cycle	n/a	n/a	1210	n/a
Peak / minute	n/a	n/a	40	n/a
Cooling water @ 60-85 (4.0-6.0 bar) (4,5), water used indirectly for cooling				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	n/a
Unit	liter	liter	liter	liter
Use / cycle	280	350	210	n/a
Peak / cycle	32	32	32	n/a
Circulating cooling water @ 30-45 (2.0-3.0 bar) (4,5), circulating water (chilled water) used indirectly for cooling				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	n/a
Unit	liter	liter	liter	liter
Use / cycle	1430	1910	5710	n/a
Peak / minute	32	32	32	n/a
Cooling water return (4,5), closed return from circulating cooling water				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	n/a
Unit	liter	liter	liter	liter
Use / cycle	1430	1910	5710	n/a
Peak / minute	32	32	32	n/a
Condensate return (4,5), non process wetted condensate				
Connection size	1/2 Thread	1/2 Thread	1/2 Thread	n/a
Instrument air @ 85-115 psi (6.0-8.0 bar) (4,5), compressed air to pilot valves, pneum motors				
Connection size (2,3)	1/4 Thread	1/4 Thread	n/a	n/a
Unit	Nm ³	Nm ³	Nm ³	Nm ³
Use / cycle	0.4	0.4	n/a	n/a
Peak / minute	0.2	0.2	n/a	n/a
Compressed air (common) @ 85-115 psi (6.0-8.0 bar) (4,5), single compressed air supply to the unit				
Connection size (2,3)	n/a	n/a	1/2 Thread	n/a
Unit	Nm ³	Nm ³	Nm ³	Nm ³
Use / cycle	n/a	n/a	3.6	n/a
Peak / minute	n/a	n/a	1.3	n/a
Drain (4,5), outlet from unit excluding cooling water				
Connection size (2,3)	3/4 Thread	3/4 Thread	3/4 Thread	n/a
Unit	liter	liter	liter	liter
Peak / minute	20	20	50	n/a
Drain (4,5), outlet from unit including cooling water				
Connection size (2,3)	1 Thread	1 Thread	1 Thread	n/a
Unit	liter	liter	liter	liter
Peak / minute	50	50	50	n/a
Floor drain air break (4,5), drain gutter with air gap in building				
Getinge drawing				
	T217	T241	T276	n/a

