

CUSTOMER: _____

REFERENCE: _____

700 SERIES VACUUM/GRAVITY STEAM STERILIZERS FOR LIFE SCIENCE APPLICATIONS

PRODUCT SPECIFICATION

PRODUCT

The Getinge Model 733LS Vacuum/Gravity Steam Sterilizer employs both gravity/downward displacement with positive pulse conditioning and pressure/vacuum pulsing for dynamic air removal. Up to 19 cycles can be easily accessed in two easy steps. Custom cycle names can be designated for each cycle and each cycle can be reconfigured for easy access. All cycle phases are sequenced and monitored by the control system, providing both audible and visual notification of deviation from certain operating parameters.

APPLICATION

For general-purpose gravity or vacuum steam sterilization and decontamination of laboratory, research and animal care supplies. The sterilizer controls are specifically designed with the flexibility needed for scientific purposes and are not to be used to sterilize medical devices for patient use in healthcare applications. The selectable temperature range is from 230°F to 275°F (110°C to 135°C) and from 219°F to 275°F (104°C to 135°C) for liquid cycles. Typical applications include wrapped and unwrapped hard goods, animal cages with bedding, textiles, and linens and liquids in self-venting or unsealed containers. The liquid exhaust is microcomputer controlled for linear and consistent liquid cool down, programmable within a specified range and includes an optional Liquid RTD.

KEY FEATURES

CHAMBER DIMENSIONS

26.5" (672mm) wide x 36" (920mm) high

- 39" (1000mm) 21.5 Cu Ft (616L)
- 53" (1350mm) 29.3 Cu Ft (831L)
- 61" (1550mm) 33.7 Cu Ft (955L)

SINGLE DOOR MOUNTING

- Recessed
- Cabinet

SINGLE DOOR DESIGNATIONS

- Right Hand Hinged, Left Hand Control Column
- Left Hand Hinged, Right Hand Control Column

DOUBLE DOOR MOUNTING (53" AND 61" ONLY)

- Cabinet, recessed one end
- Recessed both ends

DOUBLE DOOR DESIGNATIONS

- Control End (CE) Door- Right Hand Swing, Left Hand Control Column, Remote End (RE) door swing and column opposite.
- Control End (CE) Door- Left Hand Swing, Right Hand Control Column, Remote End (RE) door swing and column opposite.

NOTE: Printer located on the control end of the double door unit as standard.

BIOLOGIC SEALING FLANGE (BSF) CONTROLS DESIGNATION

- At Control End/Load End (CE), Printer at CE
- At Control End/Load End (CE), Printer at RE



- At Remote End/Unload End (RE), Printer at CE
- At Remote End/Unload End (RE), Printer at RE

CROSS CONTAMINATION BARRIER (CCB) CONTROLS DESIGNATION

- At Control End/Load End (CE), Printer at CE
- At Control End/Load End (CE), Printer at RE
- At Remote End/Unload End (RE), Printer at CE
- At Remote End/Unload End (RE), Printer at RE

CONTROL PANEL LOCATION

- On Unit
- Wall Mounted

STEAM SOURCE

- House steam

LANGUAGE (SELECT ONE)

- ENGLISH
- FRENCH
- SPANISH

OPTIONS

- Uninterrupted Power Supply (UPS). Provides 115V power for up to 30 minutes to complete a cycle in process.
- Air Compressor
- Liquid RTD (Load probe)
- Vacuum Pump
- Thermocouple Flange
- Stainless Steel Piping to Chamber
- Water Saver Package
 - 120V
 - 220V

INTERIOR EQUIPMENT

- Rack with three shelves
- Loading Car, Qty. _____
- Transfer Carriage, Qty. _____

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 a continued competitive and successful enterprise.

The sterilizer shall comply with or meet the requirements of:

STANDARDS AND CODES

- ASME (Section VIII, Division 1) Code for Pressure Vessels
- Canadian Registration Number (CRN) Pressure Vessel Design
- Uniform Plumbing Code
- ETL Listed to UL 61010A-1 and UL 61010A2-041 by Intertek Testing Services
- ETL Listed to IEC 61010-1 and IEC 61010-2-041 by Intertek Testing Services
- cETL Listed to CSA C22.2 Nos. 1010.1 and 1010.2.041 by Intertek Testing Services
- Seismic Anchoring Requirements per California Building Code

MICROCOMPUTER CONTROLS

Getinge Sterilizers employ a Hitachi 20 MHz microprocessor on a dedicated controller (CPU) with 8 MB of RAM. The control panel consists of an operator interface panel (called OP30), a thermal printer, mechanical chamber and jacket pressure gauges, status indicators, active touch sensitive switches, and controls On/Off switch. A key lock is provided to insure all door power is disconnected when entering the chamber.

Controls are located next to the door in a vertical column for convenience. If specified, the control column can be located remotely from the sterilizer with up to 32.8 feet (10 m) of cable. An RS 232 port is provided for serial communications for central data collection or remote service analysis and is ready for T-DOC™ connection. The OP30 operator interface panel is a durable ¼ VGA 5.7 inch diagonal color screen with 320x240 pixels. Below the screen are five soft keys to access other screens or displays and to make changes to cycle parameters.

A screen saver extends the life of the back lit LCD. Touching any key illuminates and reactivates the display. Push-button switches, with international symbols and descriptive words, provide door seal and unseal and movement of the door. Audible and visible operator feedback is provided when a selection is made or a fault message is displayed. Temperature can be set, controlled and displayed in degrees Celsius or Fahrenheit and pressure in psia, bar or kPa. Double door models have a printer at one end (on the control end standard) and complete OP30 Operator Interface display at both ends of the sterilizer for full control capabilities at either door.

The temperature of the discharge water is controlled by a temperature device to be less than 140°F (60°C). This switch also

conserves water usage. The chamber drain is continuously monitored for the presence of water during a cycle. If water is detected and cannot be automatically corrected, a water in drain alarm alerts the operator.

CYCLE DOCUMENTATION

The printer documents cycle performance using special thermal paper for a permanent record. Thermal printing allows for quiet operation. At cycle completion, a cycle performance record is printed. Paper is replaced by a “drop in and quick feed” method and the printed strips can be either accumulated on an automatic take-up reel, or torn off for individual cycle storage. A last cycle duplicate print and paper feed switch is provided. The printer is located on the control panel (on the control end as standard on a double door unit) and documents the following on a 200-dpi dot matrix printer (1.88" [47.6mm] wide print width):

- Process start time and date, sterilizer name and number, daily cycle number and total cycle count.
- Cycle selected with time and temperature, with other adjustable parameters identified.
- Cycle phase transition points, temperature, pressure and total cycle time.
- Process fault information messages with time of occurrence.
- Summary verification of time at selected temperature (min/max exposure values).
- Cycle verification signature line.

OP30 Operator Interface Features

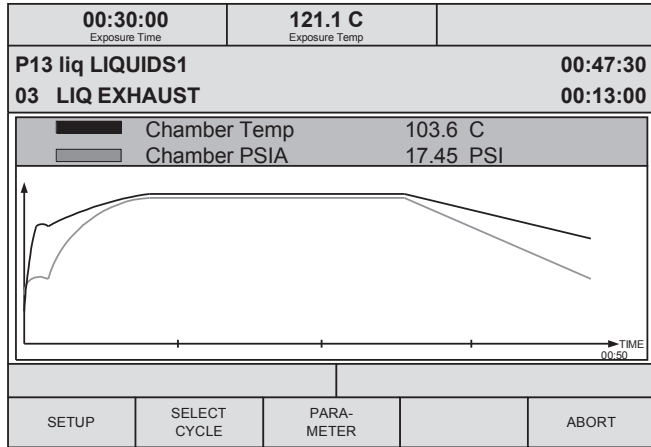
The OP30 color screen is divided into specific sections to display selection and performance information in a consistent manner. The top section identifies the time and temperature selected for the cycle. Below that is the type of cycle selected. The middle portion provides a choice of three screens 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 three screens are:

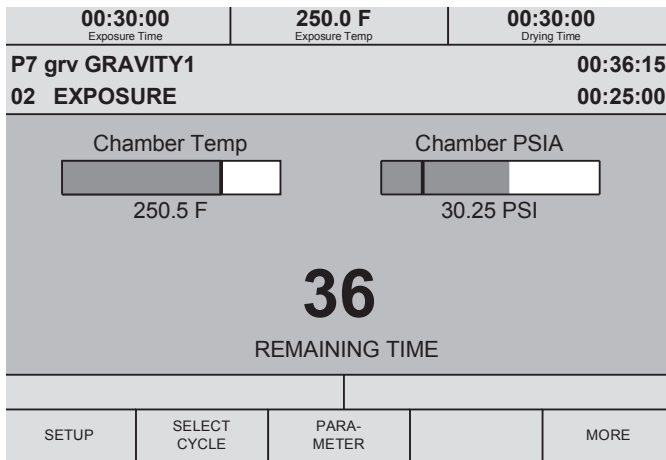
- **Detail.** Displays real time process information in text form.

00:03:00 Exposure Time	135.0 C Exposure Temp	00:20:00 Drying 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 colored graph during a cycle.



► **Bar Graph.** Displays 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).



The lower portion of the screen provides text alarm messages and non-critical system messages, both using color displays, and soft 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 changed using a quick edit feature. Each change prompts operator acceptance by the use of a Yes/No acknowledgement 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 and to establish users
- establish 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 shut-down 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.

The factory recommended cycles are:

MODEL 733LS (19 cycles total)

- 6 Gravity cycles of 30 minutes exposure at 250°F (121°C) with 30 minutes dry time.
- 6 Vacuum cycles of 3 minutes exposure at 250°F (121°C), with the following applications:
- 6 Liquid* Cycles at 250°F (121°C), with 30 minutes exposure.
- 1 Vacuum Leak Test cycle run at 268°F (131°C).

Note: Selection of time and temperatures other than factory recommendations require user verification of the cycle efficacy.

*The liquid cycle, if used, is not intended for the sterilization of liquids used directly for patient contact.

PERFORMANCE

When installed and connected to specified utility services, the system provides accurate and repeatable performance. During the timed exposure phase, the temperature will be controlled by the chamber sensor at 0.9°F (0.5°C) above the set point (± 0.2°C). Temperature selectivity is in 0.1°F (0.1°C) increments. Timing functions are selectable in one-second increments, and accuracy is within 0.04%. Temperature is controlled by a time proportioning continuous algorithm, called Proportional Integral (PI). A battery with a 10 year life holds programmed cycle values in memory. In the event of a power interruption, current cycle status is stored for up to 1 minute.

CYCLE PROGRESSION

- Gravity/Wrapped Goods (pressure pulse preconditioning)
 - a. Conditioning — steam flows into the chamber for a timed period, followed by a series of positive pressure pulses to remove chamber air.
 - b. Heat-Up — to selected temperature.
 - c. Exposure — selected chamber temperature is attained and timed.
 - d. Exhaust — chamber vented to atmospheric pressure.
 - e. Dry — filtered air is drawn through chamber for the duration of time selected (either Gravity or Vacuum Dry is selectable, Vacuum Dry is recommended).
 - f. Cycle Complete — signaled by a tone, display message and light.
- Vac/Wrapped Goods (Vacuum/Pressure Pulsing Pre-conditioning)
 - a. Conditioning — steam flows into the chamber for a time period, followed by a series of pressure/vacuum pulses to remove chamber air.
 - b. Heat up — to selected temperature.
 - c. Exposure — selected chamber temperature is attained and timed.
 - d. Exhaust — chamber vented to atmospheric pressure.
 - e. Dry — a vacuum is created for the duration of the time selected, filtered air is admitted at the end of the drying time; chamber to atmospheric pressure.
 - f. Cycle Complete — signaled by a tone, light and display message.
- Liquids —
 - a. Conditioning — steam flows into chamber for a timed period to remove air.
 - b. Heat-Up — to selected temperature.
 - c. Exposure — selected chamber temperature is attained and timed.
 - d. Exhaust — an adjustable linear exhaust.
 - e. Cycle Complete — signaled by a tone, light and display

PARAMETER ADJUSTMENTS

Utilizing a service software utility tool, an authorized service representative can adjust and modify the following cycle parameters:

- Set the number of pre-conditioning pulses.
- Set the height of positive pre-conditioning pressure pulses.
- Set the depth of negative pre-conditioning pressure pulses.
- Set over-drive.
- Adjust liquid cycle dwell time.
- Adjust liquid cycle exhaust rate.

CONSTRUCTION

The chamber is constructed of an inner shell reinforced by a series of "U" channels that form the outer jacket of the chamber. The gasket ring and backhead (on single door models) are formed and welded to the chamber body. Chamber material is 5mm (0.197") thick and door material is 6mm (0.236") thick,

and both are constructed of Stainless Steel, Type SA240 Gr. 316Ti. The jacket material is also 316Ti. The interior chamber finish is polished to a high luster finish. All pressure vessel construction meets ASME code requirements for working pressures up to 45 psig (310 kPa). The gasket ring holds a continuous, one-piece silicone gasket, 0.63" (16mm) in diameter. The body assembly is thermally insulated with 1.5" fiberglass insulation and is double thick between the jacket "U" channels.

A steam baffle is provided to prevent condensation from wetting the load. An extra threaded opening permits passage of thermocouple leads to monitor interior and load temperatures. Steam connection to the chamber and jacket are 316L material. A manual gasket retract valve is provided for emergency chamber access. When rack and shelves are supplied, shelf adjustments will be approximately every 2.5" (63.5mm). Individual rack supports and shelves shall be easy to remove for cleaning.

HINGED DOOR

The door operation is powered by an electric motor and is actuated by a switch. The open motion is in two steps. First, a slide to clear the door locking pins, then it swings open. The door will stop automatically if an obstruction is encountered. In an emergency, the power door can be opened manually by a qualified technician. At the beginning of the cycle, steam pressure behind the gasket automatically seals the door and retracts automatically at the end of the cycle. Sealing is positive and consistent. The gasket is recessed for added protection and long life. Once the cycle begins and the chamber is pressurized, the door cannot be opened. A safety switch prevents steam from entering the chamber when the door is not in the closed and sealed position. The door is insulated with fiberglass insulation and covered with a stainless steel panel.

BIOLOGIC SEALING FLANGE (BSF)

When specified, a 1/4" thick, carbon steel, inner flange plate is seal welded around the chamber periphery. The flange plate is mated to a 3/8" thick wall frame installed in the building wall. The wall frame is shipped separately prior to the sterilizer. Studs welded on approximately three-inch centers are located around the flange plate and the wall frame. The mating surfaces are gasketed with a 1/4" thick Buna-N rubber gasket using stainless steel clamping bars, nuts and lock washers. The completed assembly of the sealing flange and wall frame provides an airtight seal, which then prevents passage of airborne microorganisms from a "contaminated" room to a "clean" room. Any necessary penetrations in the flange plate for wiring or plumbing shall be through potted fittings. Infiltration tests show no cross contamination leakage through the sealing flange with pressure differential of 0.22 psig (6" W.C.). Unidirectional door operation is standard, meaning that one door is sealed at all times, and once the designated "Control End" (CE) door is opened, the sterilizer must complete a successful cycle before the door designated Remote End (RE) can be opened. Full operator interface is provided at both doors with the printer designated at one door (CE or RE). An emergency back-up system is provided to maintain the door gasket seal in the event of utility loss. Compressed air is used as the medium for gasket seal.

CROSS CONTAMINATION BARRIER (CCB)

The Cross Contamination Barrier has the same inner flange plate as the BSF, and is used when a barrier to maintain an air differential is needed on a recessed pass through unit. Sheet metal paneling is supplied to span the distance from the flange plate to the wall opening and is sealed with caulking compound, creating the barrier separation. Any necessary penetrations in the flange plate for wiring or plumbing shall be through compression fittings. Compressed air is used as the medium for sealing the sterilizer door gaskets. Unidirectional door operation as described for the BSF is standard.

PANELING

The control panel and paneling is constructed of nominal 0.050" (1.27 mm) 300 series #3 brushed finished stainless steel and is hinged for easy access to electronic components. The trim panels are built-in to fit within a recessed wall or optional cabinet. When specified, the cabinet model will be made of the same material. The control column can be wall mounted.

OPTIONAL WATER SAVER PACKAGE

Features and Benefits:

- No change in cycle performance
- Operator instructions for equipment are unchanged
- Flexible mounting schemes allow installation anywhere within 15 feet of the sterilizer
- Significant water usage reduced

When the is installed and adjusted properly, the system can provide water savings of 75% or greater. The table below shows average savings for various models of Getinge Vacuum-Steam sterilizers when the equipment is programmed for a wrapped goods cycle with 3 minutes exposure time and a dry-time of 30 minutes. Even when installed on gravity displacement sterilizers that require a lengthy dry phase for processing porous loads, the Water Saver can produce significant savings.

NOTE: Requires independent electrical service

Water Consumption Per Cycle

Equipment: 700LS

Standard Unit Consumption: 340 gal.

With Water Saver package: 110 gal.

% Savings: up to 75%

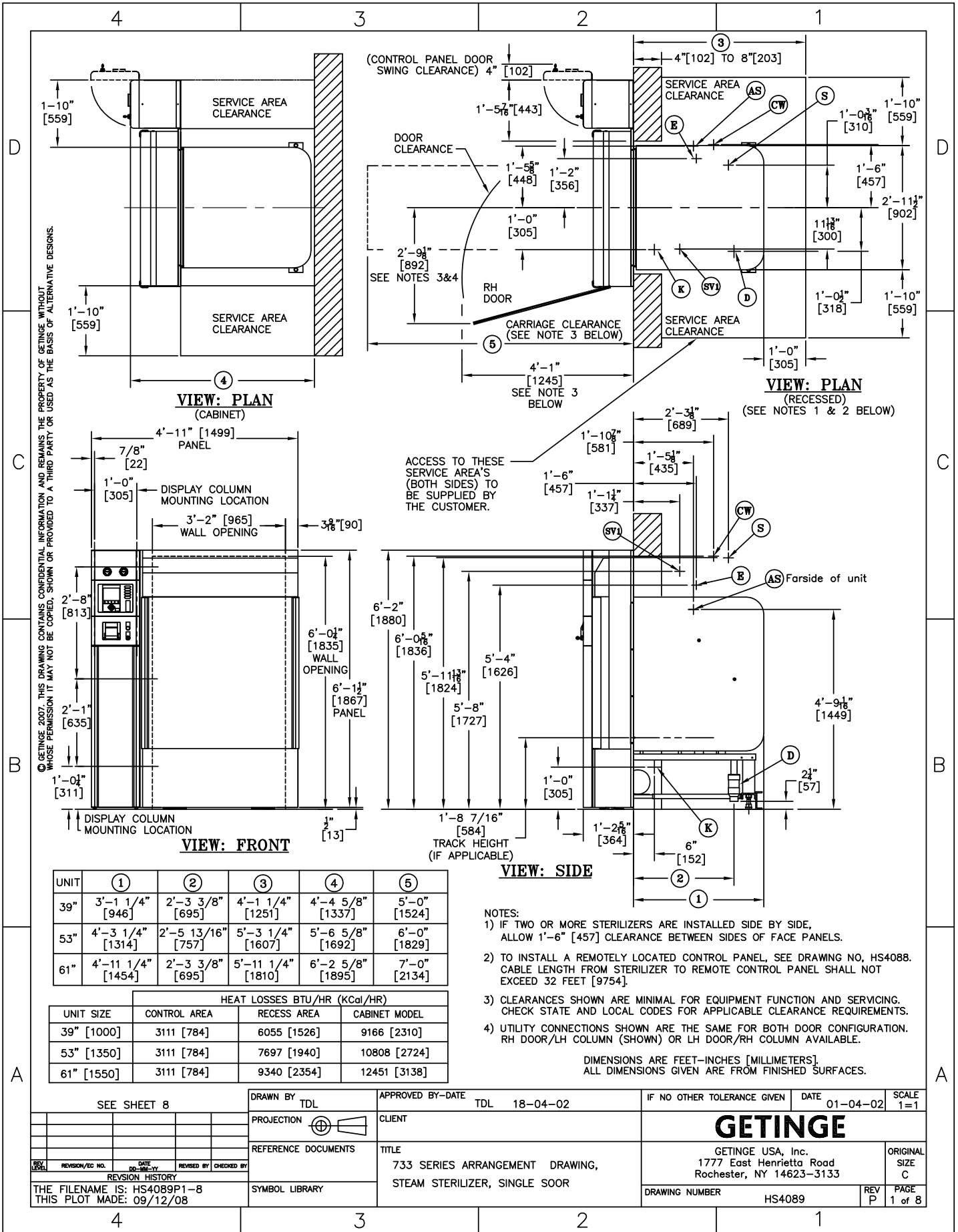
ENVIRONMENTAL IMPACT

Getinge steam sterilizers are designed and constructed with our environment in mind. To aid in the conservation of natural resources, and in recognition of prevailing Environmental Policies, in particular ISO 14001, Getinge steam sterilizers are more than 90% (by weight) recyclable.

Under normal operation, Getinge steam sterilizers produce no harmful byproducts. The Getinge steam sterilization process, in and of itself, produces nothing more dangerous than hot drain.

WARRANTY

Getinge USA, Inc. warrants that each sterilizer is carefully tested, inspected and leaves the factory in proper working condition, free from visible defects. Sterilizers are warranted for one year from the start of the warranty, including parts and labor (excluding expendable parts). The ASME pressure vessel is further warranted to the original owner against structural failure for a period of 15 years from the date of initial operation. See warranty pamphlet for complete details.



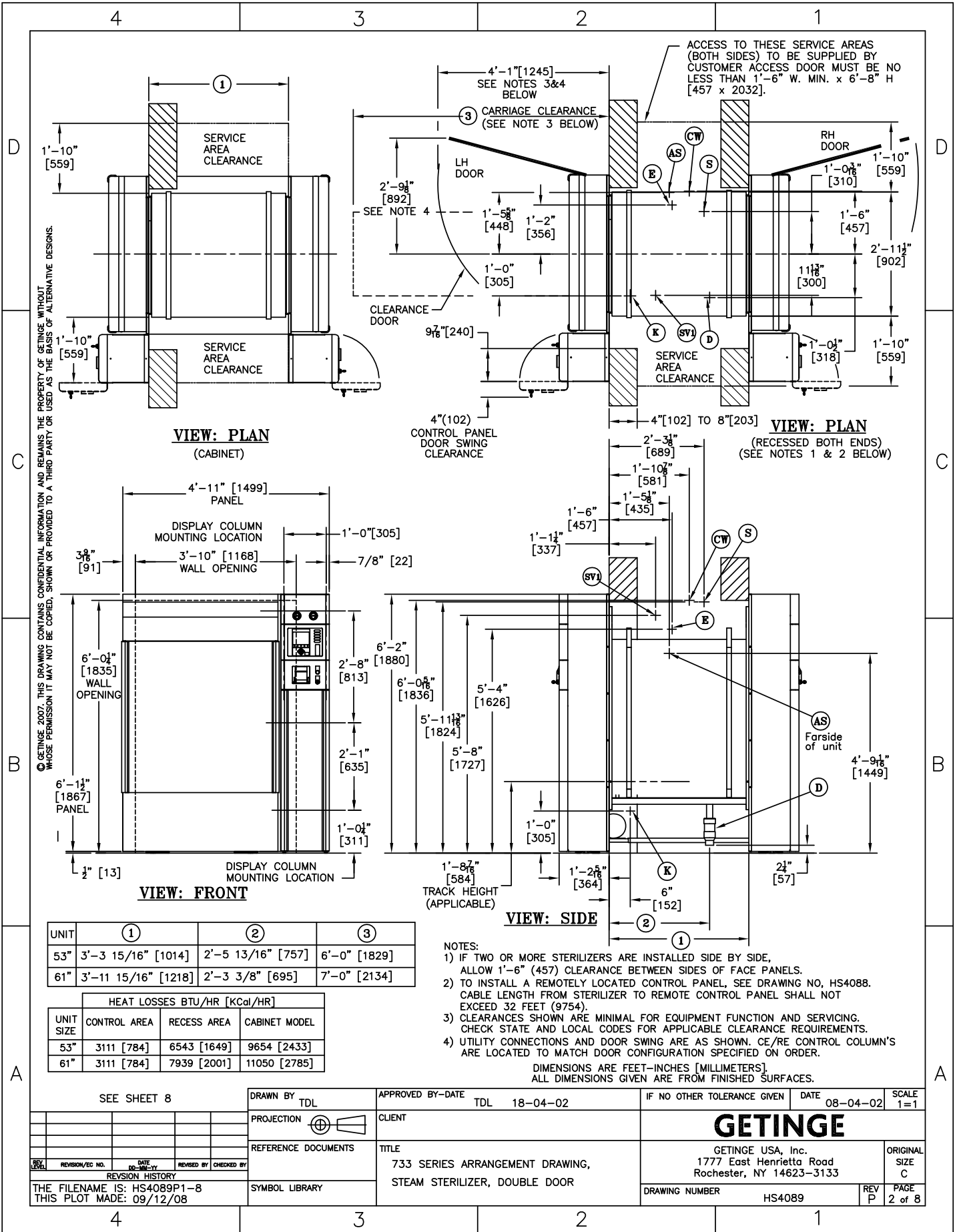
UNIT	①	②	③	④	⑤
39"	3'-1 1/4" [946]	2'-3 3/8" [695]	4'-1 1/4" [1251]	4'-4 5/8" [1337]	5'-0" [1524]
53"	4'-3 1/4" [1314]	2'-5 13/16" [757]	5'-3 1/4" [1607]	5'-6 5/8" [1692]	6'-0" [1829]
61"	4'-11 1/4" [1454]	2'-3 3/8" [695]	5'-11 1/4" [1810]	6'-2 5/8" [1895]	7'-0" [2134]

UNIT SIZE	HEAT LOSSES BTU/HR (KCal/HR)		
	CONTROL AREA	RECESS AREA	CABINET MODEL
39" [1000]	3111 [784]	6055 [1526]	9166 [2310]
53" [1350]	3111 [784]	7697 [1940]	10808 [2724]
61" [1550]	3111 [784]	9340 [2354]	12451 [3138]

- NOTES:
- IF TWO OR MORE STERILIZERS ARE INSTALLED SIDE BY SIDE, ALLOW 1'-6" [457] CLEARANCE BETWEEN SIDES OF FACE PANELS.
 - TO INSTALL A REMOTELY LOCATED CONTROL PANEL, SEE DRAWING NO. HS4088. CABLE LENGTH FROM STERILIZER TO REMOTE CONTROL PANEL SHALL NOT EXCEED 32 FEET [9754].
 - CLEARANCES SHOWN ARE MINIMAL FOR EQUIPMENT FUNCTION AND SERVICING. CHECK STATE AND LOCAL CODES FOR APPLICABLE CLEARANCE REQUIREMENTS.
 - UTILITY CONNECTIONS SHOWN ARE THE SAME FOR BOTH DOOR CONFIGURATION. RH DOOR/LH COLUMN (SHOWN) OR LH DOOR/RH COLUMN AVAILABLE.

DIMENSIONS ARE FEET-INCHES [MILLIMETERS]. ALL DIMENSIONS GIVEN ARE FROM FINISHED SURFACES.

SEE SHEET 8	DRAWN BY TDL	APPROVED BY-DATE TDL 18-04-02	IF NO OTHER TOLERANCE GIVEN DATE 01-04-02 SCALE 1=1
	PROJECTION	CLIENT	GETINGE GETINGE USA, Inc. 1777 East Henrietta Road Rochester, NY 14623-3133
	REFERENCE DOCUMENTS	TITLE 733 SERIES ARRANGEMENT DRAWING, STEAM STERILIZER, SINGLE SOOR	
REVISION HISTORY THE FILENAME IS: HS4089P1-8 THIS PLOT MADE: 09/12/08	SYMBOL LIBRARY	DRAWING NUMBER HS4089	REV P PAGE 1 of 8



UNIT	①	②	③
53"	3'-3 15/16" [1014]	2'-5 13/16" [757]	6'-0" [1829]
61"	3'-11 15/16" [1218]	2'-3 3/8" [695]	7'-0" [2134]

UNIT SIZE	HEAT LOSSES BTU/HR [Kcal/HR]		
	CONTROL AREA	RECESS AREA	CABINET MODEL
53"	3111 [784]	6543 [1649]	9654 [2433]
61"	3111 [784]	7939 [2001]	11050 [2785]

SEE SHEET 8		DRAWN BY TDL	APPROVED BY-DATE TDL 18-04-02	IF NO OTHER TOLERANCE GIVEN DATE 08-04-02	SCALE 1=1
		PROJECTION ⊕	CLIENT	GETINGE	
		REFERENCE DOCUMENTS	TITLE 733 SERIES ARRANGEMENT DRAWING, STEAM STERILIZER, DOUBLE DOOR		
REVISION HISTORY		SYMBOL LIBRARY		DRAWING NUMBER HS4089	ORIGINAL SIZE C PAGE 2 of 8
THE FILENAME IS: HS4089P1-8 THIS PLOT MADE: 09/12/08				REV P	

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NOTICE: Work by others

Safe and efficient operation of this product is dependent upon the owner/user providing the services specified herein as well as any other normally accepted electrical, mechanical or plumbing interface between user's supply and this product. Getinge USA will not assume responsibility for problems that result from non-compliance with the above conditions. The following conditions and services are required by Getinge USA equipment and are to be provided by others.

TABLE A: PLUMBING CONNECTIONS & UTILITIES
(Refer to notes 1-6 on sheet 4)

ON UNIT CONNECTION	PIPE SIZE TO UNIT	PRESSURE RANGE DYNAMIC AT UNIT	FLOW RATE MAX
S= Steam 1"NPT female see notes 4 & 10	1 1/4"NPT	50-70 psig [3.5-4.9 kg/cm ²]	210 lbs./Hr [95 kg/Hr]
CW= Cold water 1" NPT female see note 1	1-1/4"NPT	40-70 psig [2.8-4.9 kg/cm ²]	11 gpm [1.4 m ³ /Hr]
D= Drain 2" ODT	See note 2	Not applicable	See note 2
SV1(Jacket) = Sterilizer vessel pressure relief valve vent 3/4" NPT female	See note 4	Not applicable	See note 4
AS = Air Supply A dry filtered, oil-less compressed air supply connection is 1/2" NPT at location indicated. A compressor for this purpose is available from Getinge USA (p/n 61301601462) at extra cost. Air quality will be clean, dry instrument quality.	1/2" NPT	50 - 90 PSIG	1 SCFM [1.7m/hr]

TABLE B: ELECTRICAL CONNECTIONS & UTILITIES
(Refer to note 7 on sheet 4)

SERVICE	CONDUIT TRADE SIZE	UTILITY	UTILITY VOLTAGE RANGE	MAX CURRENT (AMPS)	BREAKER/FUSING RECOMMENDED	Consumption
E = Customer Interface Box (230V is optional)	1/2" [13]	115V, 50/60 Hz, 1P	104 - 126V	12 A	15 A	7 W/Hr
	1/2" [13]	230V, 50/60 Hz, 1P	207 - 253V	5 A		
K = JUNCTION BOX VACUUM PUMP MOTOR (3HP) 4 WIRES WITH GROUND (733LS ONLY)	1/2" [13]	208V, 60Hz, 3P	188 - 216V	8.2 A	10 A	N/A
		240V, 60Hz, 3P	217 - 250V	7.8 A		
		380V, 50Hz, 3P	374 - 432V	3.6 A		
		480V, 60Hz, 3P	432 - 500V	3.9 A		

TABLE C: OPERATING ENVIRONMENTAL CONDITIONS

TEMPERATURE	PRESSURE	RELATIVE HUMIDITY
50°F [10°C] to 104°F [40°C]	Atmospheric from 0-6500 ft. [2000m] (Special software needed for elevations over 6500ft. [2000m])	10 to 90% non-condensing
VOLTAGE FLUCTUATIONS (Main supply)	OVERVOLTAGE CATEGORY	POLLUTION DEGREE
not to exceed ±10% of the nominal voltage	III	2

SEE SHEET 8


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APPROVED BY-DATE TDL 18-04-02

IF NO OTHER TOLERANCE GIVEN

DATE 11-04-02

SCALE 1=1

PROJECTION 

CLIENT

GETINGE

REFERENCE DOCUMENTS

TITLE
733 SERIES STEAM STERILIZER,
ARRANGEMENT DRAWINGGETINGE USA, Inc.
1777 East Henrietta Road
Rochester, NY 14623-3133ORIGINAL
SIZE
C

REV. REVISION/EC NO. DATE OR SIZE REVISION BY CHECKED BY

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THE FILENAME IS: HS4089P1-8
THIS PLOT MADE: 09/12/08

SYMBOL LIBRARY

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HS4089

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NOTES TO ARCHITECTS & CONTRACTORS


- 1) Cold water:
 - a) Cold water quality: Use potable water with a hardness of 0.5–10 grains/gal [8–170 ppm].
 - b) Maximum temperature requirement is 80°F [27°C]. Optimal vacuum efficiency is at or below 70°F [21°C], 60°F [16°C] for optional LS vacuum pump.
 - c) Back-siphonage protection is required by others. Check local plumbing code and install required backflow preventer. (Examples: vacuum breaker, dual-check or reduced pressure type).
 - d) An optional water booster pump is available:
 - * For installations where water pressure is at least 20 psig [1.4 kg/cm²] dynamic but less than 40 psig [2.8 kg/cm²].
 - * If required backflow preventer lowers the water pressure below the minimum specified.
 - * The optional booster pump requires mechanical electrical and plumbing hook-up by customer. A separate electrical service to the water booster pump junction box is necessary. Contact your local Getinge USA representative for Utility Data.
 - e) For optional Water Saver see Getinge USA drawing HS3472.
- 2) It shall be the customer's responsibility to provide a proper drainage system in accordance with applicable local codes. Temperature of drain water will not exceed 140°F [60°C] under normal operating conditions. If cold water supply is cut-off, temperature may exceed 200°F [93°C].
- 3) It shall be the customer's responsibility to provide condensate free steam between 97% and 100% saturated vapor.
- 4) Getinge USA recommends piping all vessel pressure relief valves to a vented manifold outside the equipment service area. Caution must be exercised not to reduce the discharge capacity of the relief valve. Recommended piping practices for relief valve piping can be found in ASME Boiler and Pressure Vessel Code Section VIII, Div. 1, UG-135. Check local codes for special requirements.
- 5) For safety: all shut-off valves must be reachable when standing on floor at equipment, (i.e., water, steam & compressed air), unions must be installed at point on connection (i.e., drain vent from safety relief valve, water, steam & compressed air).
- 6) All supply customer connections to sterilizer must be labeled.
- 7) Electrical Supply:
 - a) It shall be the customer's responsibility to complete all electrical connections in accordance with the National Electrical Code and all applicable local codes.
 - b) A dedicated, permanently connected electrical supply with conveniently accessible disconnect switch (supplied by customer) is required for each sterilizer service indicated in Table B. Where both single phase and 3 phase supply is required, two disconnect switches can be used, yet shall be properly labeled and located as close as possible to each other and the sterilizer. Refer to the Getinge USA installation Manual for specific instructions.
 - c) For standard 115VAC units, 115VAC supply is required at "E". For units with the optional 230V to 115V step-down transformer (integral with sterilizer), 230VAC supply is required at "E".
 - d) For voltages other than 115V or 230V, a separate universal transformer is available to provide 115VAC to "E" with input voltage configurable to 100, 200/208, 380/400/415, or 440/460/480. It shall be the customer's responsibility to install the universal transformer.
Transformer box dimensions: 10"L [254] x 7 1/4" W [184] x 5 3/8" D [137].
- 8) For 733LS units equipped with biological sealing flange or cross contamination barrier (optional). See this drawing pages 5 & 6.
- 9) Shipment and Building Access.

Required Door Access – Free and Clear	Width	Height
a) On skid/completely assembled	4'-1" [1245]	6'-11" [2108]
b) Off skid/completely assembled	3'-10" [1168]	6'-8" [2032]
c) Off skid/some paneling removed at extra cost – Requires casters	3'-4" [1016]	6'-3" [1905]
d) Off skid/paneling and door components removed at extra cost	3'-1 1/2" [953]	5'-8" [1727]

- 10) Refer to Getinge USA Drawing HS4109 For Piping with Clean Steam.
- 11) For Seismic Forces information and loaded weights see Getinge USA drawing 700444. See sheet 8 of 8.

UNIT WEIGHTS AND CRATED MEASUREMENTS TABLE

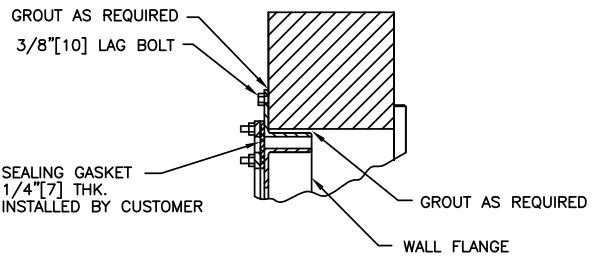
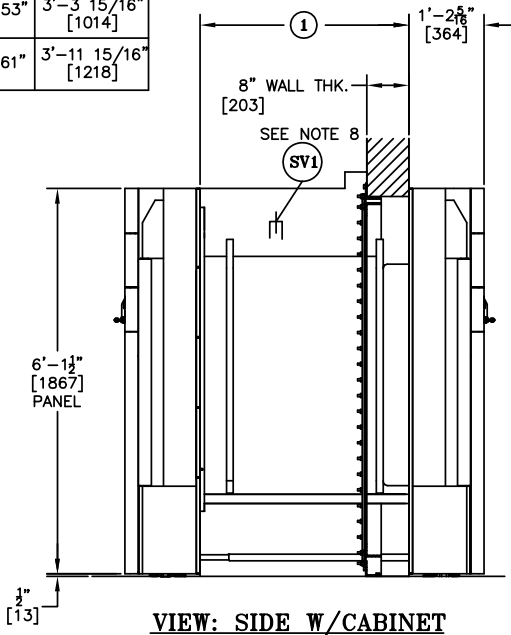
UNIT SIZE	MAX. WEIGHT (UNLOADED)		CRATED MEASUREMENTS		
	CRATED	UNCRATED	LENGTH	WIDTH	HEIGHT
39" SINGLE DOOR	2566 LBS [1163 kg]	2366 LBS [1073 kg]	7'-1" [2159]	4'-0" [1219]	6'-10" [2083]
53" SINGLE DOOR	2720 LBS [1234 kg]	2470 LBS [1120 kg]	7'-1" [2159]	4'-0" [1219]	6'-10" [2083]
DOUBLE DOOR	3128 LBS [1410 kg]	2878 LBS [1305 kg]			
61" SINGLE DOOR	2808 LBS [1273 kg]	2558 LBS [1160 kg]	7'-9" [2362]	4'-0" [1219]	6'-10" [2083]
DOUBLE DOOR	3139 LBS [1424 kg]	2889 LBS [1310 kg]			
CONTROL TOWER	NA	170 LBS [77 kg.]			

SEE SHEET 8		DRAWN BY TDL	APPROVED BY-DATE TDL 18-04-02	IF NO OTHER TOLERANCE GIVEN	DATE 11-04-02	SCALE 1=1
		PROJECTION 	CLIENT	GETINGE		
		REFERENCE DOCUMENTS	TITLE			
			733 SERIES STEAM STERILIZER, ARRANGEMENT DRAWING	GETINGE USA, Inc. 1777 East Henrietta Road Rochester, NY 14623-3133		
REVISION HISTORY		SYMBOL LIBRARY		DRAWING NUMBER HS4089	REV P	PAGE 4 of 8
THE FILENAME IS: HS4089P1-8 THIS PLOT MADE: 09/12/08						

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UNIT	①
53"	3'-3 15/16" [1014]
61"	3'-11 15/16" [1218]

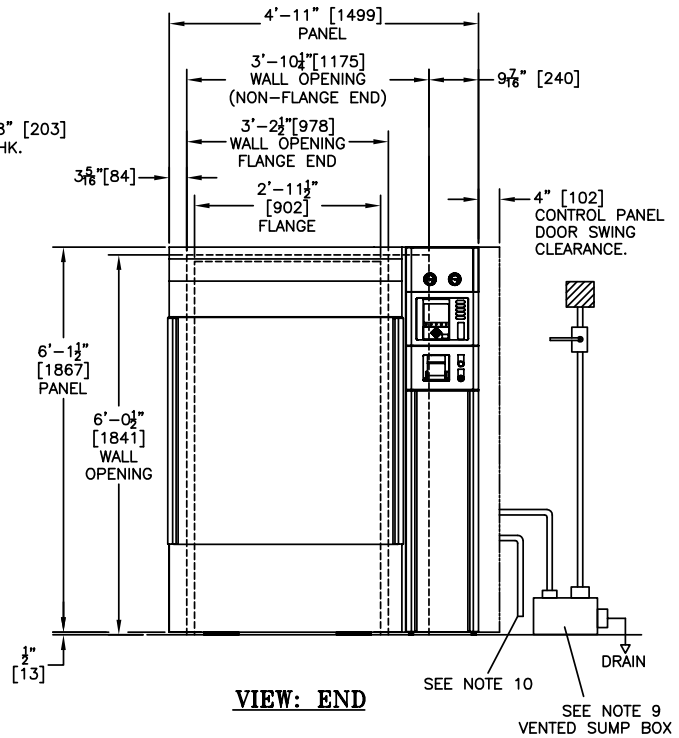
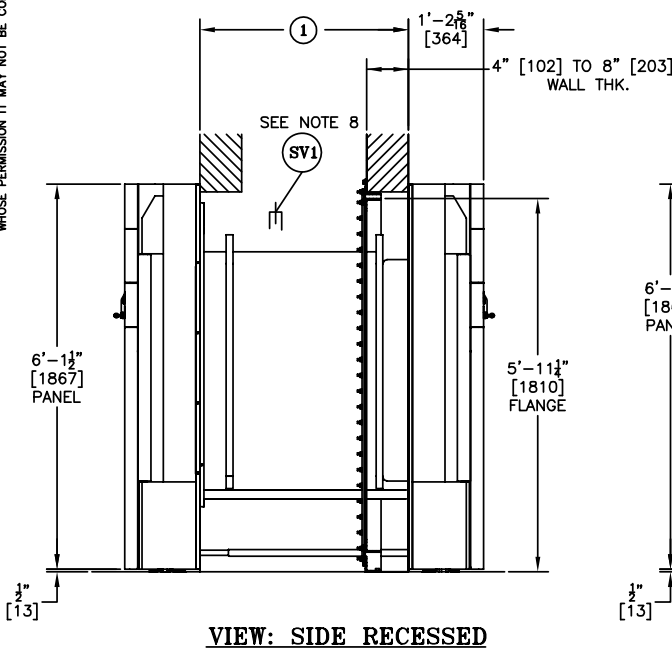
- NOTES:
- 1) FOR SERVICE LOCATIONS, SPECIFICATIONS, AND ARCHITECT NOTES SEE SHEET 2. BIOLOGICAL FLANGE IS 53" & 61" ONLY.
 - 2) FOR BIOLOGICAL FLANGE UNITS, CONTROLS ARE SWITCHED DEPENDING ON REQUESTED END FOR BIOLOGICAL FLANGE. IF (BFCE) IS REQUESTED, CONTROLS W/PRINTER ARE ON B/F END. IF (BFRE) IS REQUESTED, CONTROLS W/PRINTER ARE ON THE END OPPOSITE OF THE B/F. SERVICE LOCATIONS REMAIN THE SAME, AS INDICATED ON SHEET 2.
 - 3) WALL FLANGE (SUPPLIED BY GETINGE USA) CAN BE SHIPPED AHEAD OF STERILIZER. WALL SHOULD BE BUILT BY CUSTOMER TO DIMENSIONS SPECIFIED FOR TIGHT FIT. SEE TYPICAL INSTALLATION.
 - 4) SEE INSTALLATION INSTRUCTIONS P/N 61301608214 FOR MORE DETAIL.
 - 5) DIMENSIONS ARE FEET-INCHES [MILLIMETERS].
 - 6) FOR MOUNTING OF CABINET SEE GETINGE USA DRAWING P/N 61301608879 (53") OR 61301608880 (61").
 - 7) IF THE UNITS RECESSED AT THE END OPPOSITE THE BIOLOGICAL FLANGE, REFER TO SHEET 7 FOR DIMENSIONAL INFORMATION.
 - 8) DISCHARGE FROM CHAMBER RELIEF VALVE CAN PIPED (BY CUSTOMER) TO THE CONTAMINATED END OF THE STERILIZER.
 - 9) CHAMBER DRAIN PIPING WILL BE CONSIDERED TO BE CONTAMINATED AND A METHOD AND MEANS OF DECONTAMINATION FOR THIS PIPING HAS NOT BEEN PROVIDED FOR DISASSEMBLY/SERVICING.
 - 10) 1/2" [13] OD TUBING (JACKET) CAN BE PIPING TO SANITARY SEWER.



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VIEW: SIDE W/CABINET

TYPICAL INSTALLATION



VIEW: SIDE RECESSED

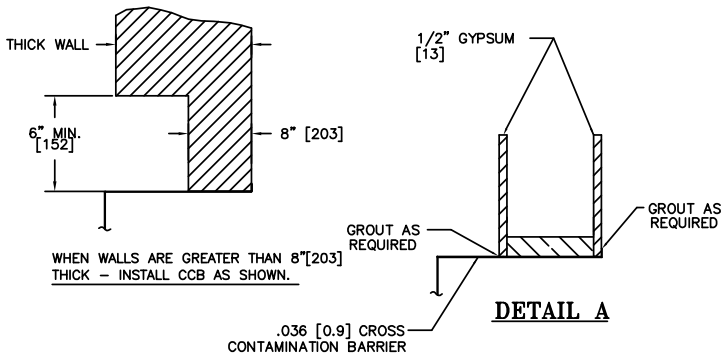
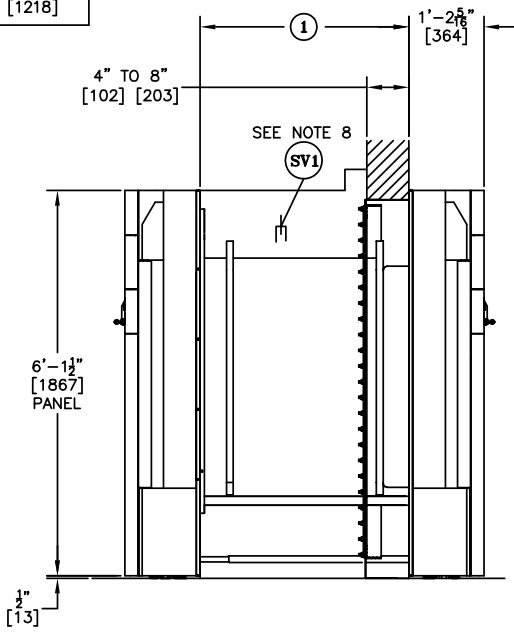
VIEW: END

SEE SHEET 8

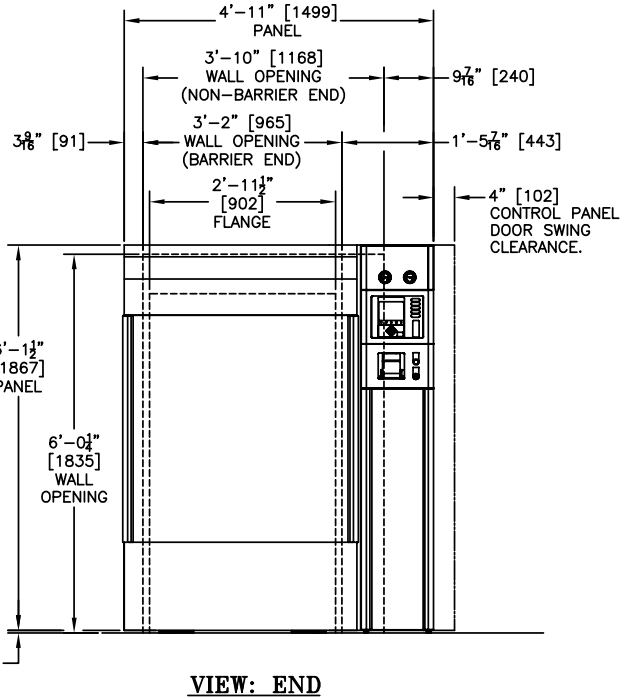
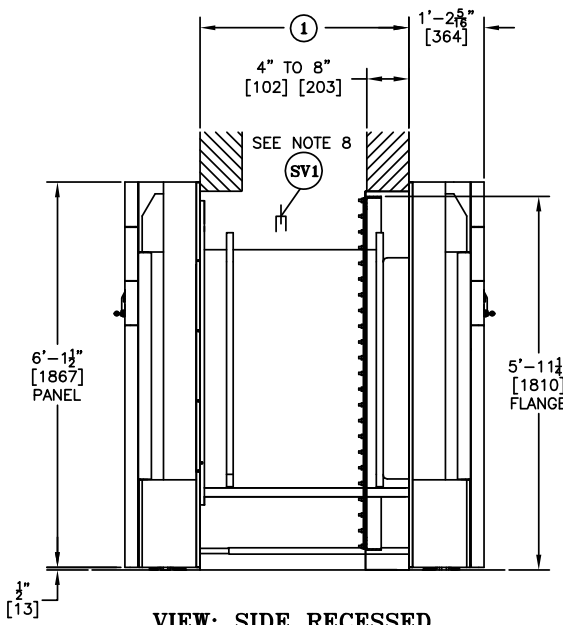
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PROJECTION 	CLIENT	GETINGE		
REFERENCE DOCUMENTS	TITLE 733 SERIES ARRANGEMENT DRAWING, STEAM STERILIZER, BIOLOGICAL FLANGE			
REVISION HISTORY THE FILENAME IS: HS4089P1-8 THIS PLOT MADE: 09/12/08	SYMBOL LIBRARY	GETINGE USA, Inc. 1777 East Henrietta Road Rochester, NY 14623-3133		ORIGINAL SIZE C
		DRAWING NUMBER HS4089	REV P	PAGE 5 of 8

UNIT	①
53"	3'-3 15/16" [1014]
61"	3'-11 15/16" [1218]

- NOTES:
- 1) FOR SERVICE LOCATIONS, SPECIFICATIONS, AND ARCHITECT NOTES SEE SHEET 2. CROSS-CONTAMINATION BARRIER IS 53" & 61" ONLY.
 - 2) FOR CROSS-CONTAMINATION BARRIER UNITS, CONTROLS ARE SWITCHED DEPENDING ON REQUESTED END FOR BARRIER FLANGE. IF (CCB-CE) IS REQUESTED, CONTROLS W/PRINTER ARE ON CCB END. IF (CCB-RE) IS REQUESTED, CONTROLS W/PRINTER ARE ON THE END OPPOSITE OF THE CCB. SERVICE LOCATIONS REMAIN THE SAME, AS INDICATED ON SHEET 2.
 - 3) SEAL ALL CRACKS AND HOLES WITH GROUT OR RTV AS REQUIRED.
 - 4) SEE INSTALLATION INSTRUCTIONS P/N 61301608214 FOR MORE DETAIL.
 - 5) DIMENSIONS ARE FEET-INCHES [MILLIMETERS].
 - 6) FOR MOUNTING OF CABINET SEE GETINGE USA DRAWING 61301608879 (53") OR 61301608880 (61").
 - 7) IF THE UNITS RECESSED AT THE END OPPOSITE THE CCB, REFER TO SHEET 2 FOR DIMENSIONAL INFORMATION.
 - 8) DISCHARGE FROM JACKET RELIEF VALVE CAN PIPED (BY CUSTOMER) TO THE CONTAMINATED END OF THE STERILIZER.



VIEW: SIDE W/CABINET



VIEW: SIDE RECESSED

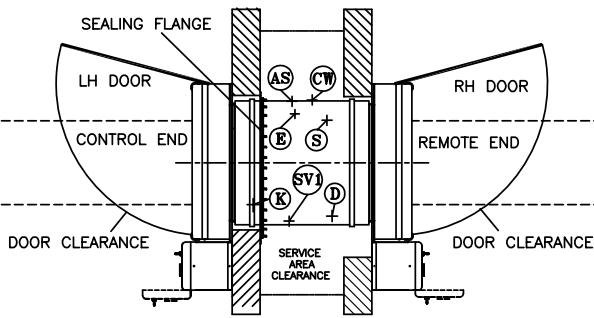
VIEW: END

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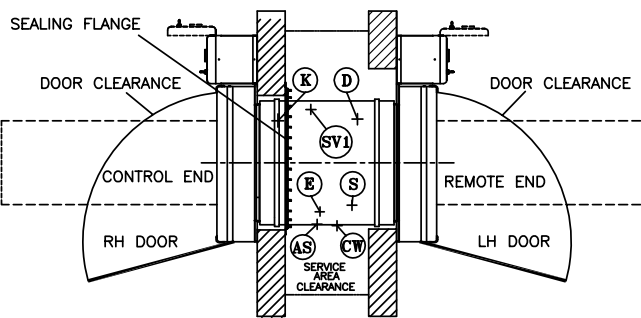
SEE SHEET 8

DRAWN BY TDL	APPROVED BY-DATE TDL 18-04-02	IF NO OTHER TOLERANCE GIVEN	DATE 14-05-02	SCALE 1=1
PROJECTION 	CLIENT	GETINGE		
REFERENCE DOCUMENTS	TITLE 733 SERIES ARRANGEMENT DRAWING, STEAM STERILIZER, CROSS-CONTAMINATION BARRIER			
REVISION HISTORY	SYMBOL LIBRARY	GETINGE USA, Inc. 1777 East Henrietta Road Rochester, NY 14623-3133		ORIGINAL SIZE C
THE FILENAME IS: HS4089P1-8 THIS PLOT MADE: 09/12/08		DRAWING NUMBER HS4089	REV P	PAGE 6 of 8

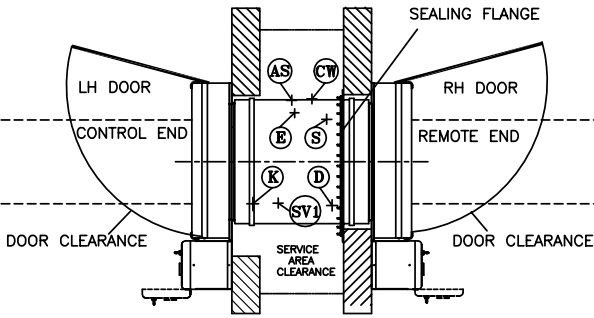
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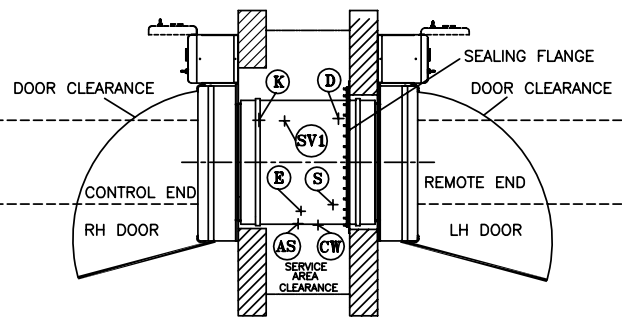
VIEW: PLAN
 (RECESSED BOTH ENDS)
 LH/RH DOOR CONTROL END WITH SEALING FLANGE



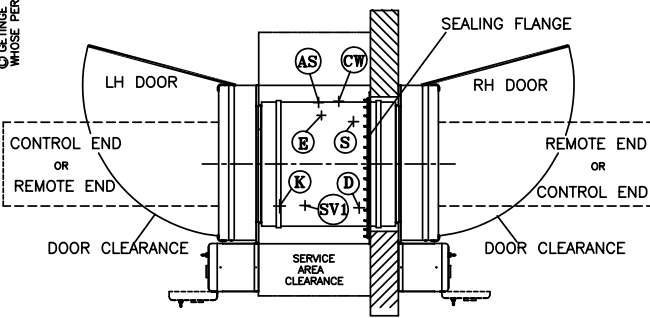
VIEW: PLAN
 (RECESSED BOTH ENDS)
 RH/LH DOOR CONTROL END WITH SEALING FLANGE



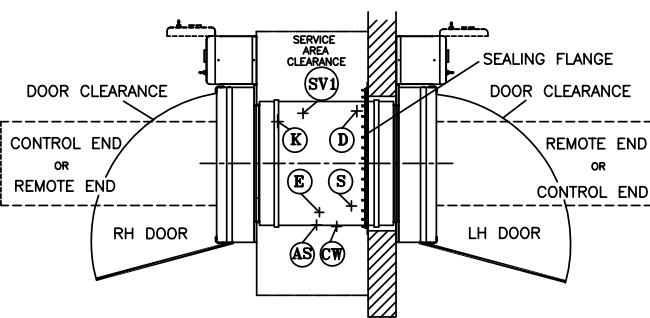
VIEW: PLAN
 (RECESSED BOTH ENDS)
 LH/RH DOOR REMOTE END WITH SEALING FLANGE



VIEW: PLAN
 (RECESSED BOTH ENDS)
 RH/LH DOOR REMOTE END WITH SEALING FLANGE



VIEW: PLAN
 (CABINET)
 LH/RH DOOR CONTROL END WITH SEALING FLANGE
 LH/RH DOOR REMOTE END WITH SEALING FLANGE

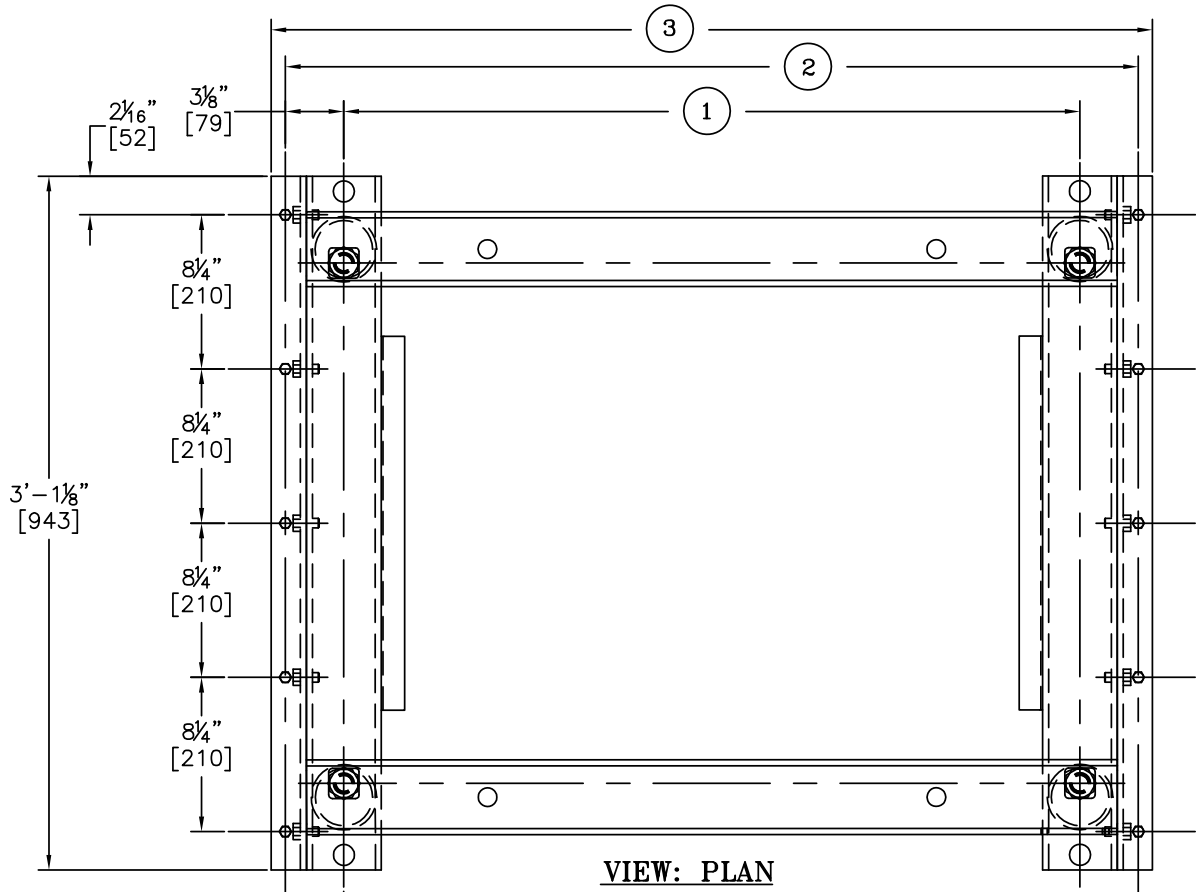


VIEW: PLAN
 (CABINET)
 RH/LH DOOR CONTROL END WITH SEALING FLANGE
 RH/LH DOOR REMOTE END WITH SEALING FLANGE

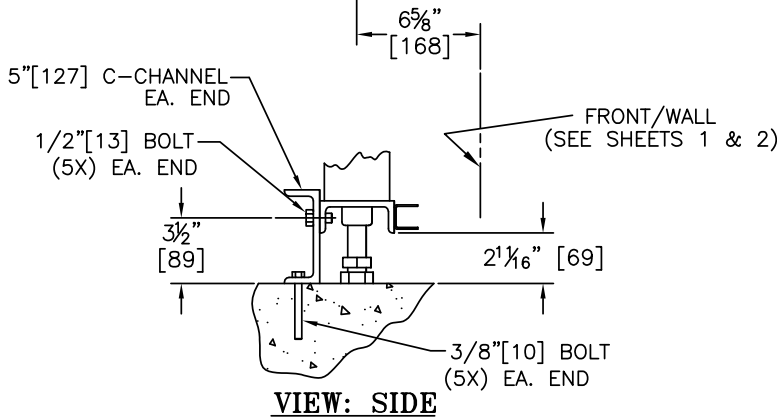
SEE SHEET 8

DRAWN BY CDC		APPROVED BY-DATE TDL 18-04-02		IF NO OTHER TOLERANCE GIVEN	DATE 05-12-02	SCALE 1=1
PROJECTION		CLIENT		GETINGE		
REFERENCE DOCUMENTS		TITLE				
SYMBOL LIBRARY		733 SERIES ARRANGEMENT DWG STEAM STER CROSS-CONTAMINATION BARRIER / BIOLOGICAL		GETINGE USA, Inc. 1777 East Henrietta Road Rochester, NY 14623-3133		
REVISION HISTORY THE FILENAME IS: HS4089P1-8 THIS PLOT MADE: 09/12/08		FLG DRAWING NUMBER HS4089		REV P	PAGE 7 of 8	ORIGINAL SIZE C

NOTE:
1) FOR SEISMIC FORCES INFORMATION AND LOADED WEIGHTS SEE GETINGE USA P/N 700444.



VIEW: PLAN



VIEW: SIDE

UNIT	①	②	③
39"	3'-3 3/8" [1000]	3'-9 5/8" [1159]	3'-11 1/8" [1197]
53"	4'-5 1/8" [1349]	4'-11 5/8" [1514]	5'-1 1/8" [1553]
61"	5'-1" [1549]	5'-7 5/8" [1718]	5'-9 1/8" [1756]

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DRAWN BY TDL PROJECTION	APPROVED BY-DATE TDL 18-04-02	IF NO OTHER TOLERANCE GIVEN DATE 08-04-02 SCALE 1=1
P 122669 02-06-08 TL AP N 122486 01-10-07 TL --- REVISION HISTORY THE FILENAME IS: HS4089P1-8 THIS PLOT MADE: 09/12/08	REFERENCE DOCUMENTS SYMBOL LIBRARY	GETINGE GETINGE USA, Inc. 1777 East Henrietta Road Rochester, NY 14623-3133 DRAWING NUMBER HS4089 REV P ORIGINAL SIZE C PAGE 8 of 8



Additional Comments:

Getinge provides complete solutions for effective and efficient cleaning, disinfection and sterilization in the healthcare and life science sectors. Our know-how comprises everything from architectural planning, production and handling equipment, to systems for full traceability of sterile goods. Our commitment covers expert advice, training and long-term technical support.

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GETINGE

THE GETINGE GROUP is a leading global provider of equipment and systems that contribute to quality enhancement and cost efficiency within healthcare and life sciences. Equipment, services and technologies are supplied under the brands **ARJO** for patient hygiene, patient handling and wound care, **GETINGE** for infection control and prevention within healthcare and life science and **MAQUET** for surgical workplaces, cardiopulmonary and critical care.