

**Amsco EAGLE® SERIES 3000**

**Gravity And Vacamatic Sterilizers**

**(3/26/98)  
Rev.10**

**P-129359-452**

**Incorporating Volumes 1, 2 and 3 in a Single Bound Set**

**Amsco EAGLE® SERIES 3000**  
**Gravity And Vacamatic Sterilizers**

**(3/26/98)**  
**Rev.10**

**P-129359-452**

**Volume 1, Service and Maintenance Procedures**

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# A WORD FROM STERIS CORPORATION

This manual contains important information on proper use and maintenance of this sterilizer. All operators and department heads are urged to carefully review and become familiar with the warnings, cautions and instructions contained herein. This sterilizer is specifically designed to process goods using only the cycles as specified in this manual. If there is any doubt about a specific material or product, contact the manufacturer of the product for the recommended sterilization technique.

A thorough preventive maintenance program is essential to safe and proper sterilizer operation. You are encouraged to contact STERIS concerning our Preventive Maintenance Agreement. Under terms of this agreement, preventive maintenance, adjustments, and replacement of worn parts are done on a scheduled basis to assure equipment performance at peak capability and to help avoid untimely or costly interruptions. STERIS maintains a nationwide staff of well-equipped, factory-trained technicians to provide this service, as well as expert repair services. Contact your STERIS representative for details.

STERIS carries a complete line of accessories for this unit to simplify, organize and assure sterility of the sterilization process. Instrument trays, Vantage and DEXTEX wraps and biological/chemical monitoring systems are all available to fulfill your facility's processing needs. A STERIS representative will gladly review these with you.

**This sterilizer is not designed to process flammable liquids nor liquids in containers that are not designed for sterilization.** Any alteration of the sterilizer which affects its operation will void the warranty and could violate state and local regulations and jeopardize insurance coverage.

IMPORTANT: A SUMMARY OF THE SAFETY PRECAUTIONS TO BE OBSERVED WHEN OPERATING THIS EQUIPMENT CAN BE FOUND ON PAGE 1 OF EACH VOLUME OF THIS MANUAL AND BEHIND THE UPPER ACCESS PANEL OF THE UNIT. DO NOT OPERATE THE STERILIZER UNTIL YOU HAVE BECOME FAMILIAR WITH THIS INFORMATION.

SERIES 3011  
16x16x26" Gravity  
(406x406x660 mm)

SERIES 3021  
20x20x38" Gravity  
(508x508x965 mm)

SERIES 3031  
24x36x36" Gravity  
(610x914x914 mm)

SERIES 3041  
24x36x48" Gravity  
(610x914x1219 mm)

SERIES 3051  
24x36x60" Gravity  
(610x914x1524 mm)

SERIES 3013  
16x16x26" Vacamatic  
(406x406x660 mm)

SERIES 3023  
20x20x38" Vacamatic  
(508x508x965 mm)

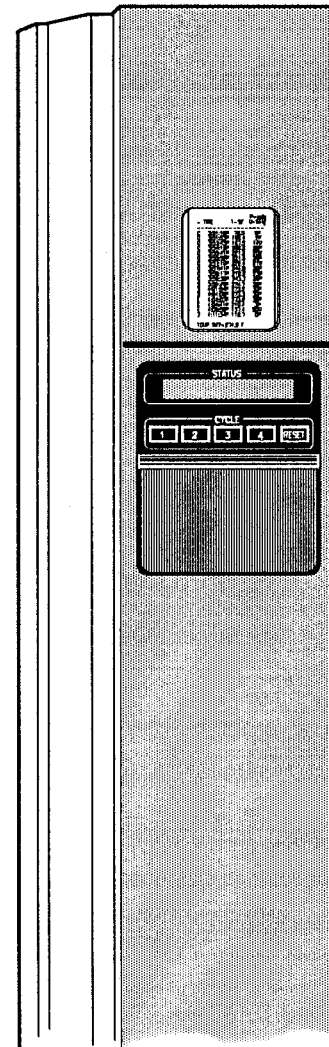
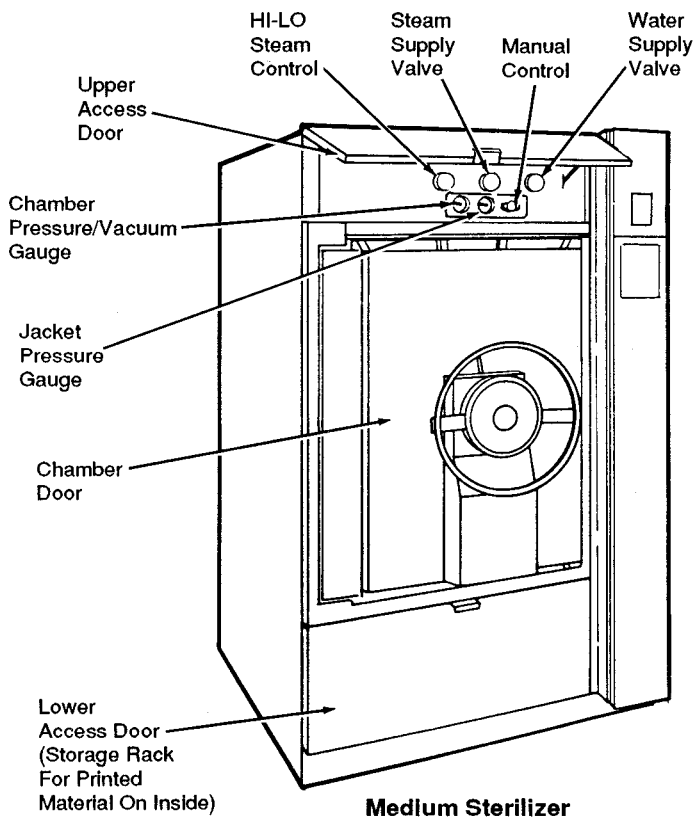
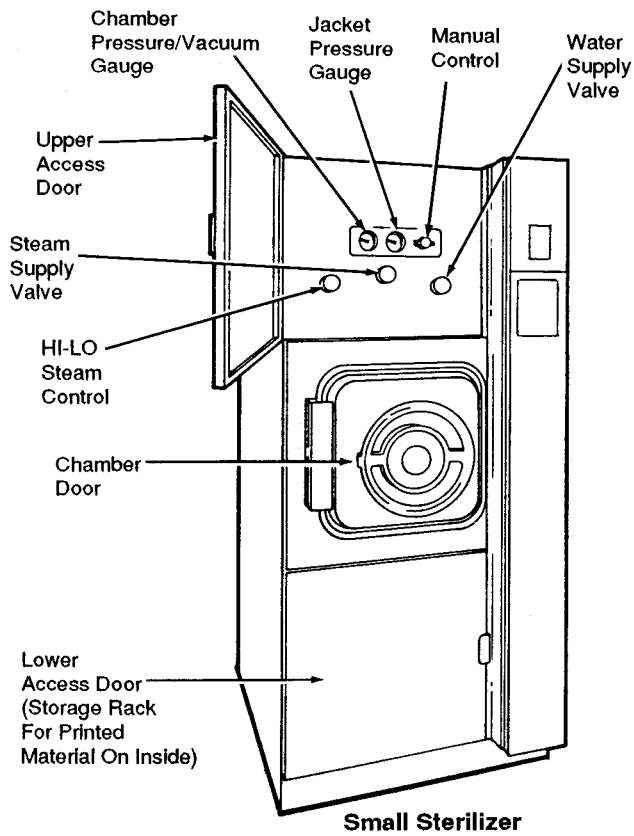
SERIES 3033  
24x36x36" Vacamatic  
(610x914x914 mm)

SERIES 3043  
24x36x48" Vacamatic  
(610x914x1219 mm)

SERIES 3053  
24x36x60" Vacamatic  
(610x914x1524 mm)

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**Stage 2™ Control Column**

**Amsco Eagle® 3000 Series Sterilizers**






# SUMMARY OF SAFETY PRECAUTIONS

1

The following is a summary of safety precautions to be observed when operating or servicing this unit. WARNINGS indicate the potential for danger to personnel, and CAUTIONS indicate the potential for damage to equipment. The precautions are repeated (in whole, or in part) where applicable throughout the manual. This is a listing of all safety precautions appearing in the manual. Carefully read them before proceeding to use or service the unit.

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## WARNING – BURN AND SHOCK HAZARD:

-  Repairs and adjustments should be attempted only by authorized persons fully acquainted with this equipment. Use of inexperienced, unqualified persons to work on the equipment or the installation of unauthorized parts could cause personal injury or result in costly damage.
-  Allow sterilizer, generator (if applicable) and accessories to cool to room temperature before performing any cleaning or maintenance procedures.
-  Sterilizer and rack/shelves will be HOT after cycle is run. Always wear protective gloves and apron (also face shield if processing liquids) when removing a processed load. Protective gloves and apron should also be worn when reloading sterilizer following previous operation.
-  When sterilizing liquids, to prevent personal injury or property damage resulting from bursting bottles and hot fluid, you must observe the following procedure:
  - Use LIQUIDS cycle only. No other cycle is safe for processing liquids.
  - Use only vented closures — do not use screw caps or rubber stoppers with crimped seal.
  - Use only Type I borosilicate glass bottles — do not use ordinary glass bottles or any container not designed for sterilization.
  - Avoid sudden full opening of door at end of cycle. Open sterilizer door no more than one inch and wait at least 10 minutes before unloading sterilizer.
  - Do not allow hot bottles to be jolted. This can cause hot-bottle explosions! Do not move bottles if any boiling or bubbling is present.
  - Allow bottles to cool to touch before attempting to move them from sterilizer shelf or tray(s) to the storage area.
-  A steam supply malfunction may cause the sterilizer-chamber to fill with scalding water. Do not open chamber door if the unit fails to complete an automatic cycle or if water leaks past the door gasket upon unlocking the door.

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## WARNING – SLIPPING HAZARD:

-  To avoid slippery floor conditions, immediately wipe up any spillage or condensation in sterilizer loading area.

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## WARNING – EXPLOSION HAZARD:

-  This sterilizer is not designed to process flammable liquids.

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## CAUTION – POSSIBLE EQUIPMENT DAMAGE:



Never use a wire brush, abrasives or steel wool on door and chamber assembly.



After installation it is mandatory to brace piping so that it will not move vertically. Failure to do so may allow p-trap to separate from the funnel.



An EQUIPMENT DRAWING showing all utility and space requirements was sent to purchaser after order for this sterilizer was received. Clearance space shown on the drawing is necessary for ease of installation and to assure proper operation and maintenance of equipment. INSTALLATION and UNCRATING INSTRUCTIONS were also furnished with sterilizer. If any of these documents are missing or misplaced, contact STERIS giving the Serial, Equipment and Model numbers. Replacement copies will be sent to you promptly.

## 2.1 Installation Checklist (See Figure 2-1)

After installing this unit according to instructions provided, complete the following checklist to assure that your installation is complete and correct. Or, if you desire, contact your STERIS representative for a technician to be scheduled to test your installation and demonstrate proper equipment operation.

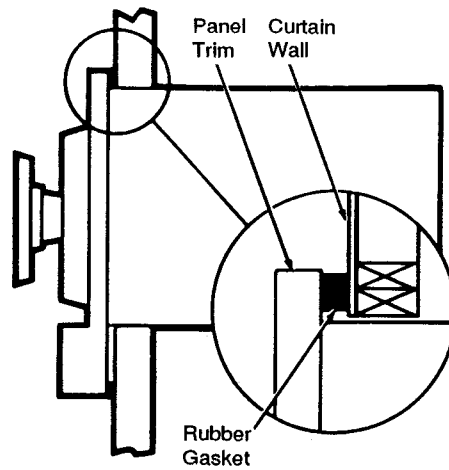
- Shut-off valves, for maintenance purposes, installed in steam and water lines at a point near the equipment.
- Disconnect switch (with OFF position lockout) installed in electric supply line near the sterilizer.

**NOTE:** *If the equipment is installed next to other equipment, shutoff valves and disconnect switches should be placed so that service can be shut off to any one unit.*

- Service clearance is as shown on the EQUIPMENT DRAWING.
- Leveling screws are correctly adjusted so that sterilizer is level and is at the height shown on the EQUIPMENT DRAWING. To check, proceed as follows:
  - a. Place a spirit level on sterilizer end ring in door opening (side to side).
  - b. **Small Sterilizers** - Place level on right side of stand on underside of angle supporting shell (running front to back).
  - Medium Sterilizers** - Place level on sterilizer end ring in door opening (top to bottom).
- If a recessed machine, panel trim fits tightly against curtain-wall opening.
- Building steam line (direct steam units) provides condensate-free steam between 97 and 100% saturated vapor and that pressure is as specified on the EQUIPMENT DRAWING.
- Building cold water line supplies water to sterilizer at the pressure specified on the EQUIPMENT DRAWING.
- Drain funnel is placed in the building waste line outlet (stubbing).
- Electrical supply for sterilizer controls is as specified on the EQUIPMENT DRAWING.
- If furnished, rack is secure and shelves move freely in and out of chamber.
- If applicable, building hot water line supplies water to electric generator of sterilizer at the pressure specified on the EQUIPMENT DRAWING.
- If applicable, electric supply for optional steam generator heaters is as specified on the EQUIPMENT DRAWING. Circuit protection by others, not supplied as part of the generator.
- If applicable, disconnect switch for optional steam generator heaters is installed in electric supply line near the sterilizer.

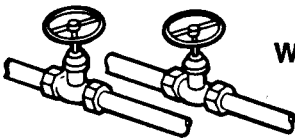
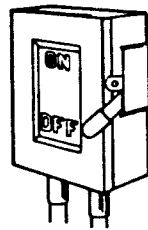


**Follow Instructions Provided.**

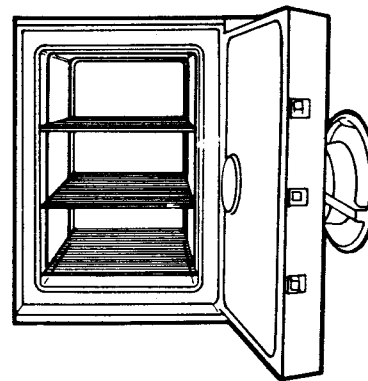


**Recessed Units.**

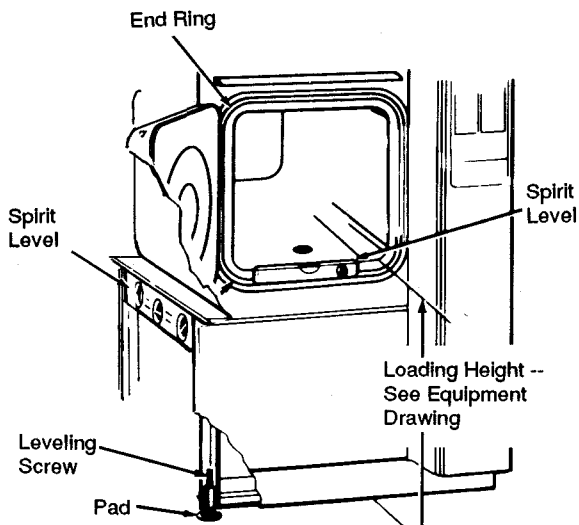
**Electrical Disconnect  
With OFF Position Lockout.**



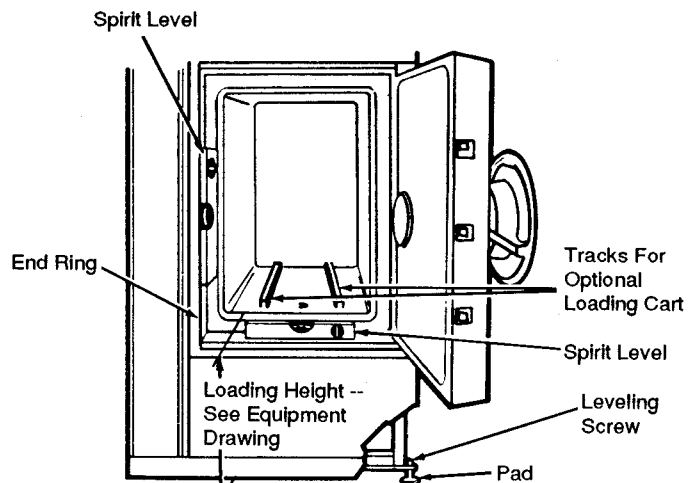
**Steam- and  
Water - Supply  
Valves.**



**Chamber Rack and Shelves (optional).**



**Small Sterilizer**



**Medium Sterilizer**

**Be Sure Sterilizer Is Level.**

**Figure 2-1. Installation Verification**

## 2.2 Filling/Starting Optional Electric Steam Generator Boiler (If Equipped) (See Figure 2-2)

1. Verify that the steam-to-jacket valve is closed.

**NOTE:** Water to sterilizer must also be turned on.

2. Open the drain valve on the side of the unit.

3. Open the water-level sight glass valves and water supply valve if they are closed.

**NOTE:** Water supply is three position valve. Rotate quickly 180° counterclockwise.

4. Position the main electric power disconnect switch to ON. (The main disconnect switch is not part of the generator.)

5. Position the sterilizer power switch to the ON position. Water will flow into the generator and out of the drain valve, flushing out the boiler.

6. Allow the unit to flush for at least 3 minutes; then close the drain valve. The generator will fill to the proper working level and then start to heat.

7. Open the steam-to-jacket valve slowly when the generator has reached proper operating pressure (within 10 minutes after flushing).

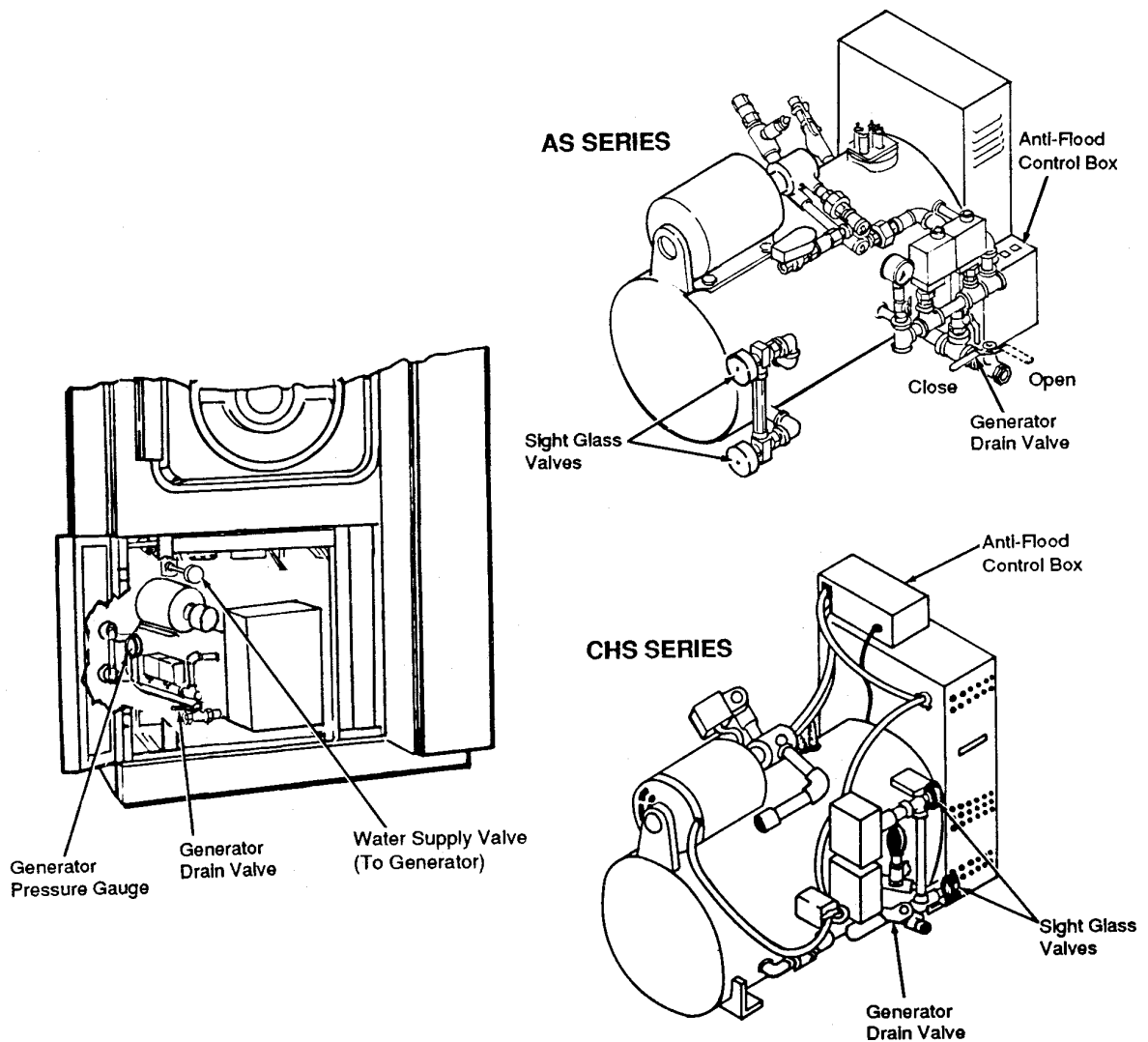


Figure 2-2. Optional Steam Generator

**⚠ BURN AND SHOCK HAZARD:** Repairs and adjustments should be attempted only by authorized persons fully acquainted with this equipment. Use of inexperienced, unqualified persons to work on the equipment or the installation of unauthorized parts could cause personal injury or result in costly damage.

Factory settings of certain sterilizer control functions are service adjustable to best adapt sterilizer to your operation. See Tables 3-1 and 3-2 for a listing of these features.

**NOTE:** These adjustments must be made by a qualified service technician. Procedures for making these adjustments are included in the MAINTENANCE MANUAL (see Section 7 for ordering information).

**TABLE 3-1. SERVICE ADJUSTMENTS (Dip Switch)**

Function	Factory Setting	Optional
Temperature Display and Printout Units*	Degrees F	Degrees C
Pressure Display and Printout Units	PSIG	Bar
Time Display and Printout Units	Std. AM/PM	Military
Automatic Duplicate Printout	No	Yes
Automatic Utilities Control**	No	Yes
Intermittent Buzzer for Cycle Complete	Yes	No
Access Code For Cycle Values	No	Yes
Point of Use Laboratory or Hospital	Hospital	Lab***
Undertemperature Recovery	Restart Timer	Resume Timer***

\* For both Fahrenheit and Centigrade temperatures (in hospital or laboratory mode), temperature is set and displayed to the **nearest degree**; however, temperature control and printout is to the **nearest 1/10 degree**.

\*\*Requires optional Utilities Shutdown Valve Kit.

\*\*\*These adjustments are only for use in a laboratory. See VOLUME 3, STERILIZER OPERATING PROCEDURES — LABORATORY USAGE

**TABLE 3-2 SERVICE ADJUSTMENTS  
(Field Test Mode)\***

<b>Function</b>	<b>Factory Setting</b>	<b>Optional</b>
Sterilize Temperature Overdrive*	3.0 F	0-9.9 F
Overtemperature Point	20.0 F	0-99.9 F
Undertemperature Point	2.0 F	0-9.9 F
Pressure Points P1, P2, P3	26, 1, 3 psig	0-36 psig
Vacuum Point (Express, Prevac Cycles)	26, 26.5 in Hg	0-36 in Hg
Number of Vacuum Pulses	EXPRESS - 2 PREVAC - 4	0-99 0-99
Print Intervals (Each Cycle)	1 min./FLASH 5 min./others	0-99 min. 0-99 min.

\* *These values are all operator settable in the laboratory mode.*

\*\* *Sterilize Temperature Overdrive, Overtemperature and Undertemperature are settable in 1/10 degree increments.*

### 3.1 Automatic Duplicate Print

Sterilizer can be set to automatically furnish a duplicate printout of each cycle at the end of the cycle. First line will always read . . . DUPLICATE PRINT . . . and complete printout of cycle data will be furnished.

### 3.2 Intermittent Buzzer When Cycle Complete

Sterilizer can be set so that the interim buzzer does not sound when cycle is complete. All additional warning buzzer alarms will still sound even if complete buzzer is set to OFF.

### 3.3 Access Code To Set Cycle Values

**NOTE:** *When Access Code function is set to OFF (service adjustment), no printouts or displays will indicate the feature exists.*

1. Open the printer door and position the power switch to ON.

- Display panel lights up.
- The printer records the time and date that the power is turned ON.

**NOTE:** *When power to prevacuum sterilizers is switched on, display will show the following messages:*

- **First Message:** PERFORM LEAK TEST? Press cycle selector touch pad number 2 for NO.
- **Second Message:** PERFORM DART TEST? (BOWIE-DICK) Press cycle selector touch pad number 2 for NO.

2. Close the printer door and raise the sliding door over the touch pad panel to access the VALUES touch pads.

**NOTE:** When **Access Code** function is enabled, the following message is displayed **every time** the **CHANGE VALUES** touch pad is pressed (even if no cycles are locked-out):

**DO YOU KNOW ACCESS CODE?**  
**NO**

(NO will be blinking on and off.)

Press **CHANGE VALUES** touch pad **while “NO” is blinking** to automatically advance control to first cycle which is not locked-out and cycle and cycle values may be changed per Paragraph 3.3 of VOLUMES 2 or 3 of this manual.

3. Press **VALUES “UP”** direction arrow touch pad to change “NO” to “YES” and press **CHANGE VALUES** touch pad **while “YES” is blinking** to advance control to the following display message:

**ENTER ACCESS CODE**  
**CODE IS 0000**

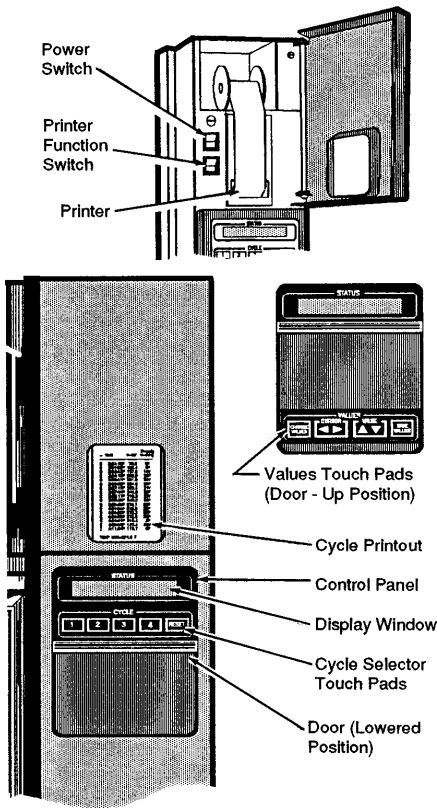
(Cursor position [first digit] will be **blinking** on and off.)

4. Enter access code as follows:

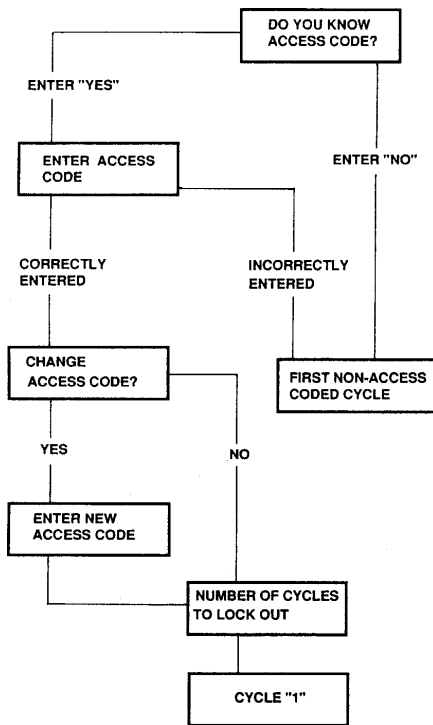
- a. Press **VALUES “UP”** direction arrow touch pad the number of times equal to the first digit.
- b. Press **CURSOR “RIGHT”** direction arrow touch pad to move cursor to the second digit.
- c. Press **VALUES “UP”** direction arrow touch pad the number of times equal to the second digit.
- d. Press **CURSOR “RIGHT”** direction arrow touch pad to move cursor to the third digit.
- e. Press **VALUES “UP”** direction arrow touch pad the number of times equal to the third digit.
- f. Press **CURSOR “RIGHT”** direction arrow touch pad to move cursor to the fourth digit.
- g. Press **VALUES “UP”** direction arrow touch pad the number of times equal to the fourth digit.
- h. Press **CHANGE VALUES** touch pad to input the entered access code.

- If **incorrect** access code is entered, control will advance to first cycle which is not locked-out and cycle and cycle values may be changed per Paragraph 3.3 or 3.5 of VOLUMES 2 or 3, **STERILIZER OPERATING PROCEDURES**. If all four cycles are locked out, control will advance to **CHANGE TIME AND DATE** display. Press **SAVE VALUES** touch pad to advance control to **READY** mode, then repeat the procedure and enter **correct** access code.

... or ...



**Figure 3-1. Turn Power On**



**Figure 3-2. Access Code Sequence**

- If **correct** access code is entered, the following message is displayed:

**CHANGE ACCESS CODE?  
NEW CODE = 0000**

(Cursor position (first digit) will be **blinking** on and off.)

**NOTE:** Maintain a written record of the currently set access code. If access code is lost or forgotten, have a qualified service technician reset the access code function.

5. Change access code **if desired** by repeating step 1a through 1h.

... or ...

- Press CHANGE VALUES touch pad **if not changing access code** to advance control.

**NOTE:** If a number of cycles are currently locked-out, that number will appear in the following message instead of "0". The following message is displayed:

**CYCLES TO LOCK OUT = 0**

(Cursor position [0] will be **blinking** on and off.)

**NOTE:** Locked-out cycles will always be in order; i.e., if one cycle locked-out, it will be #1; if two cycles locked-out, they will be #1 and #2; etc.

6. **If changing the number of locked-out cycles**, press VALUES "UP" direction touch pad the number of times equal to the desired number of locked-out cycles (1, 2, 3 or 4), then press CHANGE VALUES touch pad to advance control to cycle #1.

... or ...

- If not changing the number of locked-out cycles**, press CHANGE VALUES touch pad to advance control to cycle #1.

7. Change cycles and cycle values per Paragraph 3.3 of VOLUMES 2, or 3 of this manual.

### 3.4 Language Option

Sterilizer can be set to print and display in English, French or Spanish.

1. With power switch OFF, set Dip Switch #4 on Display Board to ON position. Turn power switch ON. Screen should display:

**1 ENGLISH      3 ESPANOL  
2 FRANCAIS**

2. Press appropriate PB to select desired language.
3. Set dip switch to OFF position to retain selected language.

**NOTE:** If it is desired to operate the unit in multiple languages at various times, leave the dip switch ON. Each time the unit is powered up, the display will ask for language choice.

**NOTE:** Whether switch is ON or OFF, any time a burn-in occurs, the display will ask for a language choice.

### 3.5 Sterilizer Number

Sterilizer can be set to print a specific sterilizer identification number from 00 to 99.

1. While in service test mode (Dip Switch #4 on Display Board), screen displays:

**STERILIZER = VAC00**

OR

**STERILIZER = GRA00**

2. Use arrows to change 00 to desired number. Press SAVE VALUES PB to save.

### 3.6 Set Sterilizer Clock/Calendar Time and Date

**NOTE:** When power to **prevacuum** sterilizers is switched on, display will show the following messages:

- **First Message:** PERFORM LEAK TEST? Press cycle selector touch pad number 2 for NO.
- **Second Message:** PERFORM DART TEST? (BOWIE-DICK) Press cycle selector touch pad number 2 for NO.

When the sterilizer is set for laboratory use the operator selects all values shown in TABLE 3-2 in addition to all the normal hospital values. Also, sterilize and dry time values are in hours, minutes and seconds instead of only minutes.

Values are set using the same procedure as hospital values. Printouts will indicate LABORATORY STERILIZER when unit is set for laboratory. (See printout example.)

1. Open the printer door and position the power switch to ON.
  - Display panel lights up.
  - The printer records the time and date that the power is turned ON.
2. Close the printer door and raise the sliding door over the touch pad panel to access the VALUES touch pads.

**NOTE:** If access code feature is enabled, bypass code by pressing CHANGE VALUES touch pad when NO is blinking.

3. Check display for correct time and date. To change either:
  - a. Press and release the CHANGE VALUES touch pad until the time and date are displayed.
  - b. Move cursor (the blinking display position) to the digit you wish to change by pressing CURSOR direction pad (left or right).



- c. Increase or decrease the value (of blinking digit) by pressing the VALUE direction pad (up or down).
- d. Repeat steps b. and c. until correct time and date is set.
- e. Press SAVE VALUES pad to record the new time and date and to advance control to ready mode. Printout of cycle values and new time and date will also be furnished.

### 3.7 Set Automatic Utilities Control Times (if feature activated)

**NOTE:** When Automatic Utilities Control feature is set to OFF (service adjustment), no printouts or displays will indicate that the feature exists.

Sterilizer can be set to automatically control utilities shutdown and restart times. The control will automatically shut off utilities when the SHUTDOWN set time is reached and turn them back on when the RESTART set time is reached. **If a cycle is in progress when the SHUTDOWN time is reached, the utilities will not be shut off until the cycle is complete.**

The following conditions apply when the Automatic Utilities Control feature is in use:

- If the SHUTDOWN and RESTART times are identical or if SHUTDOWN time is set to zero, then no shutdown will occur.
- If the RESTART time is set to zero, then no restart will occur until a CYCLE touch pad (numbered **1, 2, 3** and **4**) or RESET touch pad is pressed.
- RESTART can be activated manually by pressing a CYCLE touch pad (numbered **1, 2, 3** and **4**) or pressing RESET touch pad when in the SHUTDOWN phase.
- If a power failure occurs during SHUTDOWN, the control will return to SHUTDOWN phase upon return of power.

When the control is in the SHUTDOWN phase the display will show:

**UTILITIES SHUTDOWN  
RESTART AT (SET TIME)**

1. Open the printer door and position the power switch to ON.

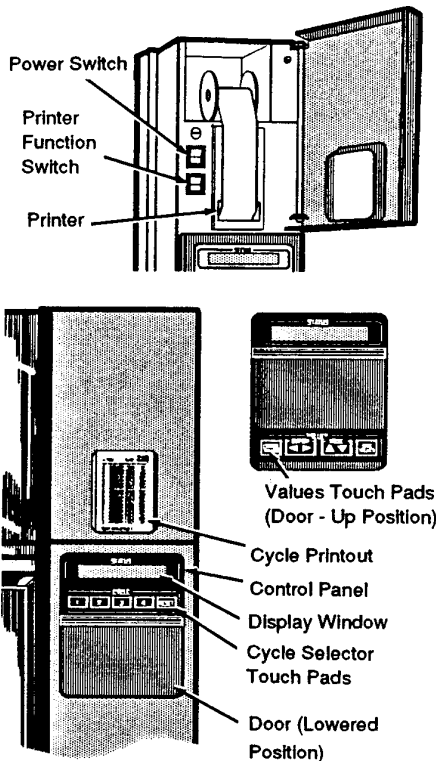
- Display panel lights up.
- The printer records the time and date that the power is turned ON.

**NOTE:** When power to *prevacuum* sterilizers is switched on, display will show the following messages:

- **FIRST MESSAGE:** PERFORM LEAK TEST? Press cycle selector touch pad number 2 for NO.
- **SECOND MESSAGE:** PERFORM DART TEST? (BOWIE-DICK) Press cycle selector touch pad number two for NO.

2. Close the printer door and raise the sliding door over the touch pad panel to access the VALUES touch pads.

**NOTE:** If access code feature is enabled, bypass code by pressing CHANGE VALUES touch pad when NO is blinking.



**Figure 3-3. Turn Power On**

3. Set or change utilities control times as follows:

- a. Press and release the CHANGE VALUES touch pad **six times** to advance display to...

**DAYS IN WEEK**  
**DAY OF WEEK**

- b. Enter the number of days in week utilities control is desired (i.e., 5 for Monday - Friday week; 7 for entire week, etc.).
- c. Enter the number of day of the above entered week that it is (i.e., Wednesday of a 5 day week would be 3, Friday would be 5, etc.).
- d. Press and release the CHANGE VALUES touch pad once more (seventh time) to advance display to...

**SHUTDOWN AT (TIME) A**  
**RESTART AT (TIME) P**

- e. Move cursor (the blinking display position) to the digit you wish to change by pressing CURSOR direction pad (left or right).
- f. Increase or decrease the value (of blinking digit) by pressing the VALUE direction pad (up or down).
- g. Press SAVE VALUES pad to record the utility control times and to advance control to READY mode. Printout of cycle values with utility control times will also be furnished.

### 3.8 Laboratory Option Description

When the sterilizer is set for laboratory use the operator selects all values shown in TABLE 3-2 in addition to all the normal hospital values. Also, sterilize and dry time values are in hours, minutes and seconds instead of only minutes.

Values are set using the same procedure as hospital values. Printouts will indicate LABORATORY STERILIZER when unit is set for laboratory. (See printout example.)

Laboratory processes may require additional special sterilizer adjustments described in Paragraphs 3.6.1, 3.8.2 and 3.8.3.

Refer to VOLUME 3, STERILIZER OPERATING PROCEDURES – LABORATORY USAGE when sterilizer is being used in the laboratory mode of operation.

#### 3.8.1 Set Sterilize Temperature Overdrive

Controls are factory calibrated to control chamber temperature at 3.0 F\* (2 C) above the set temperature. This overdrive setting assures effective load temperature control and provides for the shortest possible cycle time. For special sterilizer applications this can be adjusted from 0-9.9 F.

### 3.8.2 Undertemperature Recovery Function

**NOTE:** Resume-time option is **only** for use in the Laboratory environment. It is **not** to be used in a hospital application.

Sterilizer is factory set so that if chamber temperature drops more than 2.0 F\* below set sterilize temperature, and then set temperature is reattained, sterilize timer will reset to full sterilize time.

Sterilizer can be adjusted so that if chamber temperature drops more than 2.0 F\* below set sterilize temperature and then set temperature is reattained, sterilize timer will resume counting down remaining sterilize time.

### 3.8.3 Steam Pressure Regulator (Sterilization At Temperatures Below 250 F)

The steam pressure regulator (HI-LO Valve) is factory set for 250 and 270 F (121 and 132 C) sterilization cycles. For sterilization temperature control below 250 F (121 C), such as laboratory processes, the LO setting of steam pressure regulator must be changed by a qualified service technician.

```

      V A L U E S
      VACAMATIC STERILIZER

12/15/88      2:55:55P

1.EXPRESS
  STER TEMP=270 *F
  STER TIME= 0:04:00
  DRY TIME= 0:03:00
-----
2.PREVAC
  STER TEMP=270 *F
  STER TIME= 0:04:00
  DRY TIME= 0:03:00
-----
3.GRAVITY
  STER TEMP=250 *F
  STER TIME= 0:30:00
  DRY TIME= 0:15:00
-----
4.LIQUID
  STER TEMP=250 *F
  STER TIME= 0:45:00
-----
PREVAC:
-----
  PULSES= 4
  P1= 26.0psia
  V1=10.0 inHg

EXPRESS:
-----
  PULSES= 2
  P1= 26.0psia
  V1=10.0 inHg

CONTROL:
-----
  P2= 1.0psia
  P3= 3.0psia
  PURGE= 1:00
  C1PI= 1m
  C2PI= 1m
  C3PI= 5m
  C4PI= 5m
  TLIC=30m
  TLIE=30m
  TLIV=30m
  OVERDRIVE= 3.0°F
  OVERTEMP= 20.0°F
  UNDERTEMP= 2.0°F
  RUN TIME= 00000.4hrs

UTILITIES:
-----
  SHUTDOWN 7:00 AM
  RESTART 7:00 AM
  CYCLE COUNT 00001
-----

```

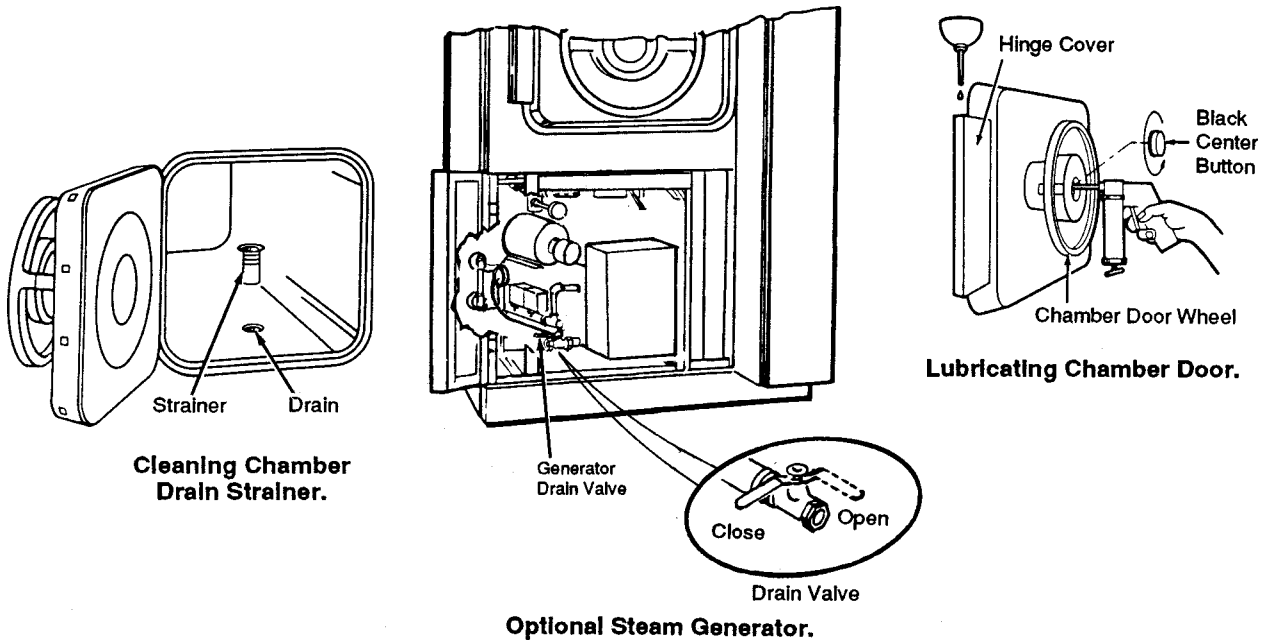
### Printout Example

\* This value is operator adjustable in the laboratory mode of operation.

- ⚠ WARNING – BURN AND SHOCK HAZARD:** Repairs and adjustments should be attempted only by experienced persons fully acquainted with this equipment. Use of inexperienced, unqualified persons to work on the equipment or the installation of unauthorized parts could cause personal injury or result in costly damage.
- ⚠ WARNING – BURN HAZARD:** Allow sterilizer, generator (if applicable) and accessories to cool to room temperature before performing any cleaning or maintenance procedures.
- ⚠ CAUTION –** Never use a wire brush, abrasives or steel wool on door and chamber assembly.

**IMPORTANT:** Paragraph 4.4, step 3 calls for periodic checking of safety valve operation in accordance with the National Board Inspection Code. A periodic boiler inspection by a qualified inspector to check the integrity of the pressure vessel of units equipped with integral steam generator is also advisable. **Be sure to check state and local requirements for such inspections.**

The following procedures should be performed at regular intervals, as indicated. This frequency is the minimum and should be increased if usage of the sterilizer demands. Should a problem occur, refer to Section 5, "Operator Troubleshooting".



**Figure 4-1. Routine Maintenance**

## 4.1 Daily (See Figure 4-1)

1. Clean chamber as follows:
  - a. Wash inside of chamber and loading equipment with a mild detergent solution such as STERISs' Liqui-Jet\* or Sonic\* detergents.
  - b. Rinse with tap water; dry with a lint-free cloth.
  - c. Remove chamber drain strainer. Clean out lint and sediment; reverse flush under running water.
  - d. Place strainer back in chamber drain.

**NOTE:** Flush drain whenever line becomes clogged or spillage occurs during a liquids processing cycle (see Paragraph 4.2).

**NOTE:** To keep your sterilizer and loading equipment looking like new, STERIS recommends an occasional application of Pry Cream\* to the non-painted surfaces.

## 4.2 Weekly (See Figure 4-1)

1. Flush chamber drain as follows:
  - a. Remove chamber drain strainer.
  - b. Rinse drain with hot solution of trisodium phosphate (two tablespoons to one quart of water).

**or**

Use a solution of 1/2 cup of STERIS Sonic Detergent\* and one quart of hot water if trisodium phosphate is objectionable.

- c. Wait five minutes.
  - d. Flush drain with one quart of hot water.
  - e. Place strainer back in chamber drain.
2. Check control and status signals as follows:
  - a. Empty chamber and set cycle values for a one minute gravity cycle.
  - b. Start cycle and observe gauges, display, and printed tape for proper functioning. (Observe non-operating end control panel also on double door models.)
3. Flush steam generator (if supplied with sterilizer) as follows:
  - a. Position POWER switch to OFF.
  - b. Open lower access door.
  - c. Wait until generator pressure gauge indicates zero, then open generator drain valve by turning valve handle counterclockwise 90 degrees.
  - d. Position POWER switch to ON and flush generator for five minutes.
  - e. Close drain valve. The generator will refill with clean water.
  - f. Position POWER switch to OFF.
  - g. Close lower access door.

\*Available from your local STERIS representative.

### 4.3 Monthly (See Figure 4-1)

1. Place a few drops of heavy machine oil (SAE 20 or 30 motor oil) on chamber door hinge pins (top and bottom). Work oil into hinge by opening and closing the door several times.

### 4.4 Quarterly (See Figure 4-1)

1. Grease door post as follows:
  - a. Unscrew the black button in the center of chamber door wheel to expose the door post grease fitting.
  - b. Inject a high-temperature grease into the fitting (STERIS P-385220-091) or equivalent.
  - c. Replace button.
2. Inspect door gasket. If it is brittle or has cracks, replace it. (See Paragraph 4.5.2 for instructions.)
3. Have a **qualified service person** check jacket and, if equipped, steam generator safety valves.\*\*

### 4.5 Optional Steam Generator

In addition to the weekly flushing, the optional steam generator requires **quarterly cleaning** and **yearly descaling** (minimum recommended frequency). Have a qualified service person perform these procedures.\*\*

**NOTE:** *If mineral deposits form rapidly, generator chamber should be cleaned and descaled more often to maintain peak operating condition. Water supply with 3 to 5 grains hardness is recommended for electric steam generators to minimize scale buildup.*

### 4.6 As Necessary

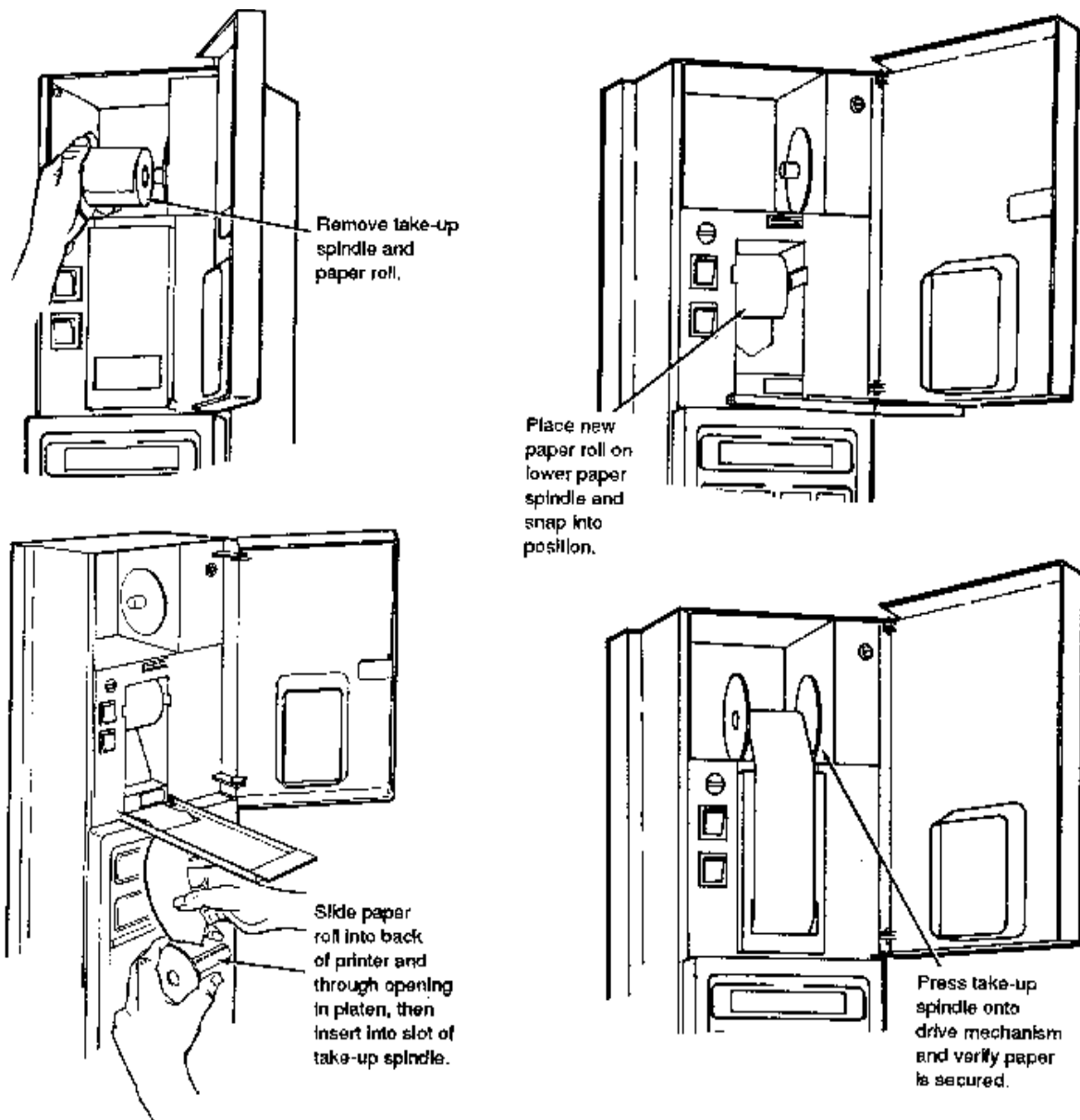
#### 4.6.1 Change Paper Roll (See Figure 4-2)

1. Open printer door.
2. Grasp and pull remaining paper through printer.
3. Remove take-up spindle from its drive mechanism by pulling it to the left.
4. Remove paper roll from take-up spindle and set empty take-up spindle aside.
5. Lower the platen and remove the lower paper spindle by pulling it straight forward.
6. Place new paper roll onto the lower spindle with the paper feeding downward from the back of the paper roll.

**NOTE:** *Check that the paper roll is positioned correctly. Thermal printer will **not** print if the paper roll is inserted backwards.*

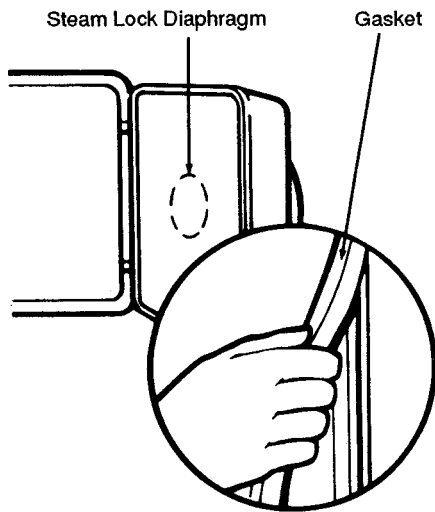
7. Place lower spindle (with new paper roll) back into position by pressing from the front until it snaps into place.
8. Pull four or five inches of paper out from roll and tear a tab on the end.

\*\* *These procedures require reference to the Maintenance Manual; see Section 7 for ordering information.*



**Figure 4-2. Change Paper Roll**

9. Slide tab of paper roll into printer from the back (with platen still in down position) until it exits from front of printer.
10. Grasp tab of paper, pull out 10 to 12 inches of paper, and feed this paper through opening in platen.
11. Raise platen back up into position and lift out take-up spindle.
12. Insert tab of new paper roll into slot of take-up spindle and rotate spindle to secure paper in slot.
13. Press take-up spindle back onto the drive mechanism and rotate to verify paper is secured to take-up roll.
14. Close printer door.



Small Door

**Figure 4-3. Install Door Gasket – Small Sterilizers**

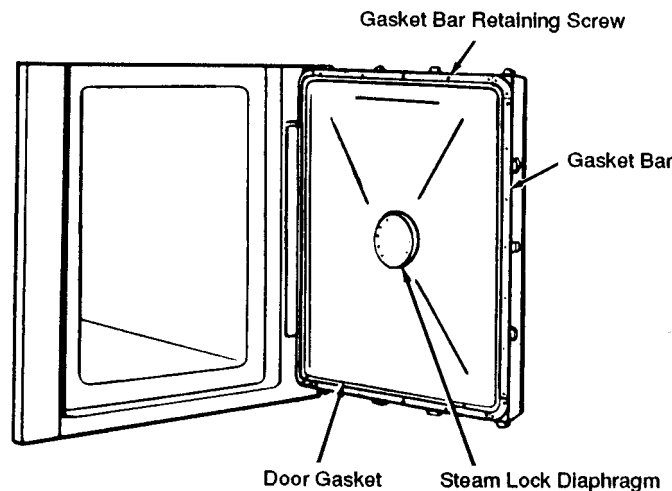
#### 4.6.2 Install Chamber Door Gasket (See Figures 4-3 and 4-4)

##### SMALL STERILIZERS

1. Remove old gasket and clean groove. The replacement gasket is sized to provide a **tight fit**.
2. Clean replacement gasket with a damp cloth and mark gasket at four equidistant points to represent corners.
3. Press gasket into the groove at the four corners **a short section at a time without stretching it while doing so**.
  - Should gasket appear too long ... **DO NOT CUT IT** ... start over again, compressing short sections into groove, until entire length is inserted.
  - **NEVER use sharp tools to push gasket into groove.**
4. Spray the sealing surface of the door frame with Fluorocarbon Spray (P-752870-091; available from your local STERIS representative) to prevent gasket from sticking.

##### MEDIUM STERILIZERS

1. Remove gasket bars and old gasket from door.
2. Clean door surface and gasket surface with STERIS Pry Cleaner. Make certain that surfaces are free of foreign matter and excess cleaner.
3. Clean replacement gasket with a damp cloth and clean threads of the gasket bar screw holes.
4. Replace gasket bars; leave bars loose enough to allow gasket to be inserted.
5. Insert new gasket under gasket bars and tighten gasket bar retaining screws just enough to hold the gasket in place.
  - **Do not compress the gasket to any great extent in any one area.**
6. Tighten gasket bars alternately until almost snug.
7. When gasket appears firmly seated under gasket bars and is flat on the door, tighten gasket bar retaining screws until snug. (Always ensure that screw heads are below surface of gasket bar.)
8. Spray the sealing surface of the door frame with Fluorocarbon Spray (P-752870-091; available from your local STERIS representative) to prevent gasket from sticking.



Medium Door

**Figure 4-4. Install Door Gasket – Medium Sterilizers**



- ⚠ WARNING – BURN HAZARD:** Before performing any cleaning or maintenance procedures, disconnect power to sterilizer and allow sterilizer and accessories to cool to room temperature.
- ⚠ WARNING – BURN AND SHOCK HAZARD:** Repairs and adjustments should be attempted only by experienced persons fully acquainted with this equipment. Use of inexperienced, unqualified persons to work on this equipment or the installation of unauthorized parts could cause personal injury or result in costly damage.

This section describes the types of sterilizer malfunctions likely to occur, and indicates probable causes. Use following Troubleshooting Chart to identify problem and probable cause.

If you are unable to correct the problem with the use of this Troubleshooting Chart, or if a problem occurs not described on chart, please call your STERIS representative. He will arrange to have your equipment promptly put into working order by a factory-trained representative. **Never permit unqualified persons to work on the sterilizer.**

## OPERATOR TROUBLESHOOTING CHART

PROBLEM	POSSIBLE CAUSE AND/OR CORRECTION
1. No power	Check facility power source — turn on.  POWER switch OFF — turn ON.
2. Unable to select cycle.	Chamber door(s) open — close and lock door(s). (Control will “beep” three times if door is open when cycle is selected.)
3. Chamber temperature does not rise to correct setting.	Chamber drain line or strainer plugged — clean line or strainer.
4. Chamber pressure and temperature drop during a cycle.	Chamber drain line or strainer plugged — clean line or strainer.
5. Pressure too high, temperature too low during sterilize phase.	Air trapped in chamber because of clogged strainer or drain — clean strainer inside chamber, flush and clean drain line and traps.
6. Steam blows out around door during sterilize phase.	Door gasket worn or defective — replace.
7. Wrapped goods are wet after completion of cycle, or excessive vapor in chamber when door is opened.	Dry time too short for load type — increase setting.
8. Water in chamber or door channel at end of cycle.	Drain plugged or clogged — clean drain. Steam separator/strainer plugged — clean. Drain line check valve defective — replace.

PROBLEM	POSSIBLE CAUSE AND/OR CORRECTION
<p>9. Jacket pressure does not rise to required level.</p>	<p>Steam supply hand valve not open — open valve.</p> <p>Possible flood condition/steam supply solenoid valve closed.*</p> <p>Steam supply less than 50 psig (3.52 kg/sq.cm) dynamic — check supply pressure and increase if necessary.</p>
<p>10. Cycle does not advance from prevacuum phase.</p>	<p>Door gasket worn or defective — replace.</p> <p>Chamber drain line or strainer plugged — clean line or strainer.</p> <p>Water supply hand valve not open — open valve.</p> <p>Water supply less than 30 psig (2.11 kg/sq.cm) dynamic — check supply pressure and increase if necessary.</p> <p>Steam supply insufficient — see 9 above; "Jacket pressure does not rise . . ."</p> <p>HI-LO valve not set correctly — check that it is set on HI.</p>

The parts listed in this section are those that would be necessary to do minor maintenance on this sterilizer. Recommended spares are the minimum number of items that we recommend you keep on hand. Recommendations are for one sterilizer — not all parts need to be stocked. Where available, renewal parts packages eliminate the need of stocking individual items.

## 6.1 Spare Parts List (Series 3011, 3021, 3013 and 3023)

**NOTE:** Parts that are applicable to Flash/Gravity (Series 3011 and 3021) or Vacumatic (Series 3013 and 3023) units are marked in parenthesis; all other parts are applicable to both type units.

DESCRIPTION	PART NUMBERS	SPARES
<b>Chamber Door:</b>		
Cleaning Kit, Door Frame	P-753377-091	—
Diaphragm, Pressure Lock	P-7230-061	1
Gasket, Door, 16"	P-74367-091	1
Gasket, Door, 20"	P-78767-091	1
Gasket, Diaphragm	P-7753-091	1
• Renewal Parts Package (includes gaskets and diaphragms) 16"	Q-754360-002	1
• Renewal Parts Package (includes gaskets and diaphragms) 20"	Q-754360-003	1
Door Switch	P-136475-001	1
<b>Control:</b>		
Control Board Assembly	P-146653-201	—
• RAM/RTC IC	P-150828-625	1
Printer Board Assembly	P-146653-204	—
• Printer	*	1
Display Module	P-93908-435	1
Auxiliary Power Supply Assembly	P-136807-141	1
Paper Take-Up Switch	P-129359-463	1
Power Switch	P-93902-846	1
Printer Function Switch	P-93908-901	1
Fuse, 2 Amp (Box of 5)	P-764317-449	1
Fuse, 3 Amp (Box of 5)	P-764317-778	1
Fuse, 1/4 Amp (Box of 5)	P-764317-819	1
Transducer Assembly (Grav.)	P-764323-314	1
Transducer Assembly (Vac.)	P-93908-907	1
Thermistor Assembly	P-93908-517	1
Door Switch Relay (CR1)	P-93909-576	1
<b>Filter, Air (Plastic Housing):</b>		
• Cartridge	P-93909-592	—
• Cartridge	P-129360-802	2
<b>Filter, Air (Metal Housing):</b>		
• Cartridge	P-93160-001	—
• Cartridge	P-23953-091	2
• "O" Ring	P-41301-091	2

\* Use P-764324-604 for Stage 2 Units.

Use P-755716-005 for Stage 3 Units with thermal printer.

DESCRIPTION	PART NUMBERS	SPARES
<b>Gauges:</b>		
Chamber Pressure	P-90525-091	—
Jacket Pressure	P-90730-091	—
Lens	P-77121-091	2
<b>Eagle Stage II Printer:</b>		
Paper (Box of 5 Rolls)	P-129359-008	5
<b>Strainers:</b>		
Steam	P-47671-091	1
• Screen	P-50341-091	1
• "O" Ring	P-28447-091	1
Water	P-47670-091	—
• Screen	P-756249-091	1
• "O" Ring	P-764326-727	1
Trap, Steam, 1/2 NPT	P-129222-001	—
• Repair Kit	Q-764080-001	1
Vacuum Breaker (Grav.):	P-90233-091	—
• Repair Kit	P-752477-091	1
Vacuum Breaker (Vac.):	P-77023-001	—
• Repair Kit	P-752735-091	1
<b>Valves:</b>		
Angle Valve, 3/8 NPT	P-5654-091	—
• Renewal Parts Package	Q-754361-001	1
Check Valve 3/8 NPT	P-5424-091	—
• Disc	P-764315-614	1
Check Valve, Water, 3/4 NPT	P-83870-001	1
Check Valve, Air, 1/2 NPT	P-150822-354	—
• Disc, Teflon	P-764319-608	1
Safety Valve	P-150828-473	1
Angle Valve, 3/4 NPT (Vac.)	P-26907-091	—
• Renewal Parts Package	Q-754361-003	1
Solenoid Valve, Steam (S5), 3/8 NPT	P-83264-002	—
• Repair Kit	P-764070-001	1
• Coil	P-764070-002	1
Solenoid Valve, Drain (S3), 3/4 NPT	P-83228-002	—
• Repair Kit	P-764070-001	1
• Coil	P-764070-002	1
Solenoid Valve, Water (S4), 3/8 NPT (And S7, Vac.)	P-83263-002	—
• Repair Kit	P-764073-001	1
• Coil	P-764072-002	1
Steam Control Valve (HI-LO)	P-20661-091	—
• Repair Kit	Q-754359-001	1
Solenoid Valve, Steam (S2), 3/8 NPT	P-150822-309	—
• Repair Kit	P-764071-001	1
• Coil	P-764078-002	1
Solenoid Valve, Air (S1), 3/4 NPT	P-84444-002	1
• Repair Kit	P-764078-001	1
• Coil	P-764078-002	1

DESCRIPTION	PART NUMBERS	SPARES
<b>Steam Generator (AS Series, If Applicable):</b>		
Check Valve, 1/2 NPT	P-764320-492	1
Drain Valve, Ball, 1/2 NPT	P-764317-863	—
Electrode Rods (4)	P-764316-748	1
Gaskets (3), Heater	P-764317-713	1
Gauge, Pressure, 0-160 PSI	P-750467-091	—
Safety Valve, 100 PSI	P-764323-459	1
Sight Glass Assembly	P-764321-195	—
Solenoid Valve, Fill, 1/2 NPT	P-764319-693	1
Ball Valve, 3 Port 1/2 NPT	P-93902-920	—
Vacuum Breaker, Hot Water	P-77021-091	1
Pressure Switch	P-93909-394	1
Valve, Flow Control, 1/4 NPT	P-89018-091	1
Spark Plug Probe	P-764323-515	1
Heater, 9.75KW, 208/230 V	P-764322-460	3
Heater, 9.75KW, 440 V	P-764322-882	3
Pressure Switch	P-764319-305	—
Pump, Rotary Vane	P-764319-902	—
Motor Assembly, 120/240 V, 50/60 Hz	P-764323-487	—
Fuse, 10A	P-764323-556	1
Fuse, 1A (Box)	P-764317-462	1
PC Board	P-755715-735	—
<b>Steam Generator (CHS Series, If Applicable)</b>		
Check Valve 1/4" NPT	P-764321-287	1
Valve, Ball 1/2"	P-764323-514	1
Rod Probe Operating 4-3/8" – Probe Set	P-764323-596	1
Rod Probe Low Level 5-1/2" – Probe Set	P-764323-596	1
Electrode Liquid Level Probe	P-764323-515	1
Electrode Anti Flood Probe	P-764323-511	1
Gasket Heater	P-764323-527	1
Gauge Pressure 2" 0-160 psig	P-750467-091	1
Valve Safety 1/2"	P-764323-459	1
Sight Glass set	P-764323-512	1
Tube Sight Glass 6-1/2" Long	P-764323-543	1
Rod Guard 7" long	P-764323-327	1
Valve Solenoid 1/4" Water	P-764323-548	1
Switch Ranco Hi-Limit Manual Reset	P-764323-471	1
Switch Ranco Operating Auto.	P-764323-470	1
Heater 208/240V, 30 kW	P-764323-549	1
Pump	P-764323-551	1
Motor Assembly 1/4 HP, 120V	P-764323-487	1
<b>Anti-Flood Control</b>		
Control Board	P-764323-552	1
Relay	P-764323-553	1
Fuse 8/10 MDL	P-764323-554	1
<b>Control Box</b>		
Contacteur Power 50 A, 3 Ph 120 V coil	P-759747-001	1
Fuse MDA 10	P-764323-556	1
Relay Control 25 A, 1 Ph 120 V Coil	P-764323-557	1
Control Board Water Feed	P-755716-242	1
Relay Pump Motor (DLA Board)	P-764322-763	1

## 6.2 Spare Parts List (Series 3031, 3041, 3051, 3033, 3043 and 3053)

**NOTE:** Parts that are applicable to Gravity (Series 3031, 3041 and 3051) or Vacumatic (Series 3033, 3043 and 3053) units are marked in parenthesis; all other parts are applicable to both type units.

DESCRIPTION	PART NUMBERS	SPARES
<b>Chamber Door:</b>		
Cleaning Kit, Door Frame	P-753377-091	—
Diaphragm, Pressure Lock	P-7230-061	1
Gasket, Door,	P-97487-091	1
Gasket, Diaphragm	P-7753-091	1
• Renewal Parts Package (includes gaskets and screws)	P-75006-091	1
<b>Control:</b>		
Control Board Assembly	P-146653-201	—
• RAM/RTC IC	P-129360-549	1
Printer Board Assembly	P-146653-204	—
• Printer	*	1
Display Module	P-93908-435	1
Auxiliary Power Supply Assy.	P-136807-141	1
Paper Take-Up Switch	P-129359-463	1
Power Switch	P-93902-846	1
Printer Function Switch	P-93908-901	1
Fuse, 2 Amp (Box of 5)	P-764314-449	1
Fuse, 3 Amp (Box of 5)	P-764317-778	1
Fuse, 1/4 Amp (Box of 5)	P-764317-819	1
Transducer Assembly (Vac.)	P-93908-907	1
Transducer Assembly (Grav.)	P-764323-314	1
Thermistor Assembly	P-93908-517	1
Door Switch Relay (CR1)	P-93909-576	1
<b>Filter, Air:</b>		
Cartridge	P-82619-001	—
"O" Ring	P-321198-091	2
Gasket	P-754325-091	2
	P-758175-091	2
<b>Gauges:</b>		
Chamber Pressure	P-90525-091	—
Jacket Pressure	P-90730-091	—
Lens	P-77121-091	2
<b>Eagle Stage II Printer:</b>		
Paper (Box of 5 Rolls)	P-129359-008	1
<b>Strainers:</b>		
Steam, 3/4 NPT	P-41389-091	1
• Screen	P-751552-091	1
• Gasket	P-756207-091	1
Water, 3/4 NPT	P-47708-091	—
• Screen	P-754616-091	1

\* Use P-764324-604 for Stage 2 Units.  
Use P-755716-005 for Stage 3 Units with thermal printer.

DESCRIPTION	PART NUMBERS	SPARES
<b>Strainers (continued):</b>		
Trap, Steam, 1/2 NPT	P-129222-001	—
• Repair Kit	Q-764080-001	1
Vacuum Breaker:	P-77023-001	—
• Repair Kit	P-752735-091	1
<b>Valves:</b>		
Angle Valve, 3/4 NPT	P-26907-091	—
• Renewal Parts Package	Q-754361-003	1
Check Valve 3/8 NPT	P-5424-091	—
• Disc	P-764315-614	1
Check Valve, Water, 3/4 NPT	P-83870-001	1
Check Valve, Air, 1/2 NPT	P-150822-354	—
Assembly, Disc	P-764319-608	1
Safety Valve	P-150828-476	1
Solenoid Valve, Steam (S5), 3/8 NPT	P-83264-002	—
• Repair Kit	P-764070-001	1
• Coil	P-764070-002	1
Solenoid Valve, Drain (S3), 3/4 NPT (Grav.)	P-83228-002	—
• Repair Kit	P-764070-001	1
• Coil	P-764070-002	1
Solenoid Valve, Drain (S3), 3/4 NPT (Vac.)	P-83229-002	—
• Repair Kit	P-764071-001	1
• Coil	P-764078-002	1
Solenoid Valve, Water (S4), 3/4 NPT (And S7, Vac.)	P-83261-002	—
• Repair Kit	P-764072-001	1
• Coil	P-764072-002	1
Steam Control Valve (HI-LO)	P-22429-091	—
• Repair Kit	Q-754359-003	1
Solenoid Valve, Steam (S2), 1 NPT (Vac.)	P-150822-311	—
• Repair Kit	P-764317-688	1
• Coil	P-764070-002	1
Solenoid Valve, Air (S1), 3/4 NPT	P-84444-002	—
• Repair Kit	P-764078-001	1
• Coil	P-764078-002	1
<b>Power Door (If Applicable):</b>		
Bridge Board	P-136806-645	—
Capacitor	P-764326-130	1
Relay	P-129360-019†	1
Relay, Solid-State	P-129360-018	1
Fuse, 15 Amp	P-129360-538	2
Switch, Hinge	P-76507-091	1
Switch, Current	P-93909-395	1
Motor, Hinge	P-93908-393	—
Motor, Lock	P-56396-197	—
Switch, Limit	P-129359-316	1
Clutch Coupling	P-136806-678	—
Rheostat	P-91709-091	1

† If unavailable, replace with Relay P-129352-007  
and Socket P-150822-857

Publications listed in this section are those associated with the use and maintenance of the Series 3000 Sterilizers. When ordering, please include the part number (if applicable), description, and quantity for each publication requested. Order directly from your STERIS representative.

Publication	Subject	Part #
Technique Manual	Guidelines for properly wrapping/packaging items to be sterilized, determining what a wet pack is, and solving wet pack problems.	MK-2085
Uncrating instructions	Series 3000 Small Sterilizers	P-129212-001
Installation Instructions	Series 3000 Small Sterilizers	P-129359-499
Maintenance Manual	Series 3000 Small Sterilizers	P-764322-693
Uncrating instructions	Series 3000 Medium Sterilizers	P-129211-001
Installation Instructions	Series 3000 Medium Sterilizers	P-129145-001
Maintenance Manual	Series 3000 Medium Sterilizers	P-764322-695
Equipment Drawing	16x16x26, Vac/Gravity, Single Door, Cabinet	P-65435-250
Equipment Drawing	16x16x26, Vac/Gravity, Single Door, Recessed One Wall	P-65435-251
Equipment Drawing	16x16x26, Vac/Gravity, Double Door, Recessed One Wall	P-65435-252
Equipment Drawing	20x20x38, Vac/Gravity, Single Door, Cabinet	P-65435-256
Equipment Drawing	20x20x38, Vac/Gravity, Single Door, Recessed One Wall	P-65435-257
Equipment Drawing	20x20x38, Vac/Gravity, Double Door, Recessed One Wall	P-65435-258
Equipment Drawing	20x20x38, Vac/Gravity, Double Door, Recessed Two Walls	P-65435-259
Equipment Drawing	24x36x36, 48, 60, Gravity, Single Door, Cabinet	P-65435-277
Equipment Drawing	24x36x36, 48, 60, Gravity, Single Door, Recessed One Wall	P-65435-278
Equipment Drawing	24x36x36, 48, 60, Gravity, Double Door, Recessed One Wall	P-65435-279
Equipment Drawing	24x36x36, 48, 60, Gravity, Double Door, Recessed Two Walls	P-65435-280
Equipment Drawing	24x36x36, 48, 60, Vacamatic, Single Door, Cabinet	P-65435-281
Equipment Drawing	24x36x36, 48, 60, Vacamatic, Single Door, Recessed One Wall	P-65435-282
Equipment Drawing	24x36x36, 48, 60, Vacamatic, Double Door, Recessed One Wall	P-65435-283
Equipment Drawing	24x36x36, 48, 60, Vacamatic, Double Door, Recessed Two Walls	P-65435-284