

ALL AMERICAN PRESSURE STEAM STERILIZERS

OPERATING INSTRUCTIONS FOR MODELS 1915X, 1925X and 1941X

IMPORTANT: Do not operate this Pressure Steam Sterilizer until you have thoroughly read these operating instructions.

1. Remove inner container from sterilizer. Pour clean water (distilled water is preferred) into sterilizer to a depth of not less than one inch, nor more than two inches. Do not put water into the removable inner container. Place inner container rack into bottom of container. Place articles to be sterilized in container. Be sure to arrange items to permit free circulation of steam during sterilization. Place a towel on top of the items in the container to absorb any moisture which may drip down from the cover. Place packed container back into the sterilizer.

2. **LUBRICATE METAL-TO-METAL SEAL.** Apply lubrication to the beveled edge of bottom only (See Fig. 1). The recommended lubricant is petroleum jelly. Professional sterilizer lubricating material is available from scientific supply houses, but readily available material such as vaseline may be used.

Exclusive "Metal-to-Metal" seal.
(apply lubricant here)

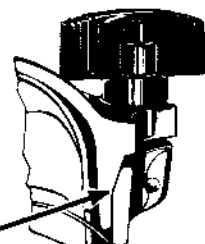


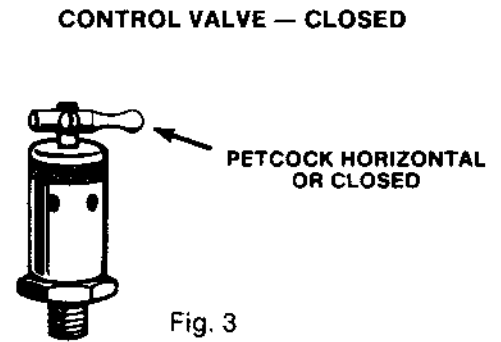
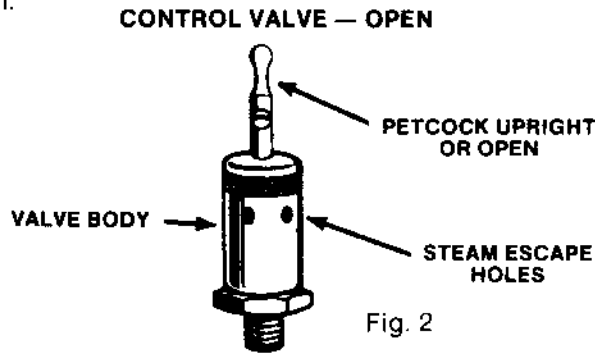
Fig. 1

3. Place sterilizer cover on unit, making sure that the index arrow on the cover aligns with index line-mark on side of bottom. Make certain when placing the cover on the unit that the flexible tube is inserted into the guide channel on the inside wall of the aluminum container. It is helpful to place the container in the unit with the guide channel on the right-hand side as you face the unit. Tighten the wing nuts on the cover evenly by always tightening down two opposite wing nuts at one time. This will draw the cover down evenly and assure a proper seal. **NEVER USE A WRENCH OR ANY MECHANICAL DEVICE TO TIGHTEN WING NUTS.**
4. Place unit on heat source. Open control valve (See Fig. 2), by placing valve lever in an upright position. The steam generated at the bottom of the sterilizer will travel around the outside of the container and then down through the material in the container to the bottom and force the air from the bottom of container up through the flexible air exhaust tube and out of the control valve. It is important that the steam be permitted to escape vigorously from the unit for at least four minutes and then you may close the control valve. This process of permitting the steam to escape is called "EXHAUSTING" and is necessary to remove the air trapped in the unit. With the control valve in the closed position, (See Fig. 3), pressure will then rise inside the sterilizer and will be indicated on the pressure gauge. When the pressure gauge reaches 17 to 19 pounds, you then reduce heat as necessary to maintain constant pressure of 17 to 19 pounds within the unit.
5. **STERILIZATION PERIOD.** The sterilization period begins when the pressure is in the 17 to 19 pound range. **AT THIS TIME YOU START THE STERILIZATION CYCLE AND CONTINUE IT FOR NOT LESS THAN 35 MINUTES.**
6. At the end of the sterilization period, turn off the heat and move the toggle on the control valve to an upright (vertical) position (See Fig. 2), so that the steam is permitted to escape. When the toggle is in an upright position, the steam will escape at maximum. To avoid touching the hot toggle, you may use any object such as a pencil or hot pad, etc., to move the toggle from the closed to open (vertical) position. When pressure gauge indicates zero, loosen the wing nuts by turning counter-clockwise two opposite wing nuts at one time. Having removed all wing nuts from the slots in the cover, you may lift the cover slightly and turn the cover counter-clockwise for easy removal. Inner container may then be removed from sterilizer for unloading.

If it is desired to start another sterilization cycle, repeat procedure as outlined.

If the sterilizer is not going to be used again, then before putting the unit away, it is recommended that all water be emptied from the unit and the unit be thoroughly dried inside. It is recommended that the water be poured out of the unit while the bottom is still warm as the heat that is retained will help dry the unit out if

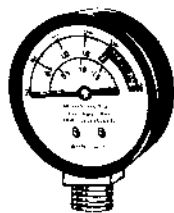
you leave the cover off for 15 minutes before placing the cover on the unit for storage. For storage purposes, it is only necessary to slightly tighten the wing nuts just enough to hold the cover on the bottom. When storing, it is recommended that the control valve be left in a vertical position to permit air to circulate into the bottom.



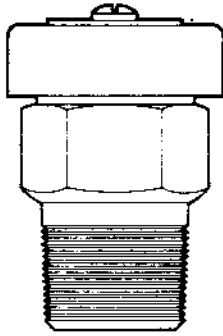
MAINTENANCE:

1. **METAL-TO-METAL SEAL.** (See Fig. 1) The metal-to-metal seal must be lubricated periodically (as stated in the instructions) to prevent the cover from sticking to the bottom because of dryness or lack of lubrication. If the sterilizer is operated without any lubricant, this could result in severe damage to the metal-to-metal seal and make it very difficult to remove the cover in some cases, and also become very difficult to maintain a steam-tight seal. If using petroleum jelly, it is recommended that a small amount be applied every third or fourth use. The metal-to-metal seal must not be permitted to become dry. It is also important to periodically wipe off the metal-to-metal seal by using a clean towel. This will remove any build-up of foreign material or particles trapped in the lubricant. Use 0000 grade steel wool in a circular motion around the metal-to-metal seal to remove any build-up of hardened lubricant on the metal-to-metal seal. Periodically check your seal.
2. **PRESSURE GAUGE, PART NO. 72.** (See Fig. 4) Do not immerse the pressure gauge in water when cleaning the unit. The pressure gauge normally does not require any maintenance except that you make certain the opening into the gauge on the underside of the cover is open and free of any foreign matter. If the gauge is ever dropped, the unit should not be used until the gauge has been checked to make certain that it is functioning properly. If you ever require your gauge to be checked, you may take it to a local scientific supply house or you may send it into the Factory Service Center, 18th and Franklin Street, Manitowoc, Wisconsin 54220. Include \$3.00 to cover handling and return shipping of the gauge. Enclose a letter with your gauge stating the problem and include a full return shipping address.
3. **CONTROL VALVE, PART NO. 65.** (See Fig. 2 & 3) To insure long life and proper operation of the control valve, periodic cleaning is recommended. To clean, unscrew the "knurled top" portion and clean thoroughly in hot soapy water. If any foreign material has built up inside the unit, then clean the ball and seat using a solvent such as acetone or a similar product. Be sure and clean the control valve in hot soapy water once again after using any solvent. Following this procedure will insure long life and proper operation of the control valve.

In the event that you are unable to properly clean any build up of foreign material in your control valve, then it is recommended that the control valve be discarded and replaced with a new control valve.

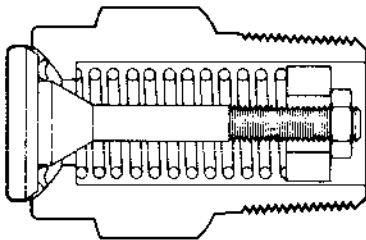


4. **AIR EXHAUST TUBE, PART NO. 2155.** (See Fig. 5) It is essential that the Air Exhaust Tube be frequently checked to make sure that air passes freely through it. We recommended that you blow air through the air exhaust tube at least once a month to make certain it is not blocked or plugged with any foreign material. The air exhaust tube is not part of the control valve and can be removed separately from the cover in the event that it is blocked. You can clean out the air exhaust tube by using a small diameter wire and running it through the entire length of the tube several times. If you notice a build up of any foreign material on the inside of the air passage or a build up of any corrosion on the inside of the air passage, then it is recommended that you discard this tube and replace it with a new air exhaust tube.



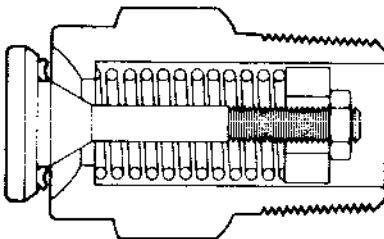
Part No. 2050CS

HOW IT WORKS



CLOSED

Resilient seal design prevents leakage. Sealing efficiency increases with increased pressure up to cracking pressure. Metal to metal seat on low pressure side supports spring load, prevents sticking.



OPEN

When system pressure overcomes spring force poppet opens momentarily exposing variable orifice between poppet and body to pass increasing flow with minimum pressure rise without blowdown.

RESEALING

Resilient seal automatically establishes line of contact with spherical seat. Seal provides dead tight reseal very close to cracking pressure.

5. **EXCESS PRESSURE RELIEF VALVE, PART NO. 2050CS.** (See Fig. 6) This sterilizer is equipped with a new type of excess pressure relief valve, Part No. 2050CS. It is designed for longer, maintenance-free service, however, we do recommend that the valve be replaced every three years in normal service. The valve is designed to release pressure at 23 PSI (plus/minus 1 PSI). Each valve is equipped with a deflector cap which will direct any steam released in a downward direction. Also it is possible to manually release steam and pressure in this unit. This can be done by simply grasping the deflector cap and pulling upwards slightly. This will instantly release pressure inside the unit until, of course, you release the cap and the valve will instantly reseal, thereby stopping any further pressure from escaping.

To order any replacement excess pressure relief valves (or any other spare parts), please refer to the parts price list. If you do not have a copy of our current parts price list, you may write the company and one will be forwarded to you by return mail.

Some of the operating characteristics of the No. 2050CS EXCESS PRESSURE RELIEF VALVE are: (See Fig. 6)

ZERO LEAKAGE to 95-98% of cracking pressure.

INCREASED SEALING EFFICIENCY as pressure increases. Resilient "Q" ring seal is forced against metal seat as pressure increases up to set cracking pressure.

CRACKING PRESSURE ACCURACY — Valves are preset to required cracking pressure of 23 PSI.

6. **OVERPRESSURE PLUG, PART NO. 1010.** This ALL-AMERICAN Sterilizer is equipped with an additional safety device which is named "OVERPRESSURE PLUG — PART NO. 1010".

The purpose of the OVERPRESSURE PLUG — PART NO. 1010 is to offer an "extra margin of safety" whenever the sterilizer is used. The OVERPRESSURE PLUG is designed to release pressure in the range of 30 to 35 PSI.

The OVERPRESSURE PLUG is made from Neoprene and is red in color. The placement of the OVERPRESSURE PLUG is on the top surface of the sterilizer cover and located directly to the rear of the top handle, in front of part No. 2050CS Excess Pressure Relief Valve. See Figure 7 and Figure 8.

It is recommended for the most efficient results and best possible performance that you replace the Overpressure Plug every 6 months, and also it should always be replaced whenever it becomes hard or deformed. It is also recommended that the opening in the cover where the Overpressure Plug fits be periodically checked to determine that no foreign material, residue, or build-up of grease, etc. is present. Clean the opening with hot soapy water frequently (a toothbrush is helpful) to maintain a clean opening. (By periodically and frequently it is meant at least every month during period of use.) This cleaning/inspection is in addition, of course, to normal daily cleaning performed after using the unit.

Fig. 6

The Overpressure Plug can be removed using fingers to pull it out of its opening from the underside of the cover. After cleaning, reinsert the Overpressure Plug by pushing the round top side of the Overpressure Plug into the opening from the underside of the cover. When the Overpressure Plug is correctly in position the indented portion will be visible when the underside is viewed. Be certain to check, after inserting plug, that the round top of plug and top lip are fully thru the opening so that the top lip is not folded under.

Before you install the Overpressure Plug, it is important to check the opening in the cover to be sure that it is absolutely free of any foreign material or grease/residue build-up. When replacing the Overpressure Plug, push the rounded side of the plug into the opening from the underside or bottom of the cover. When the Overpressure Plug is in place the indented underside of the Overpressure Plug will be visible from the underside of the cover. See illustration below.

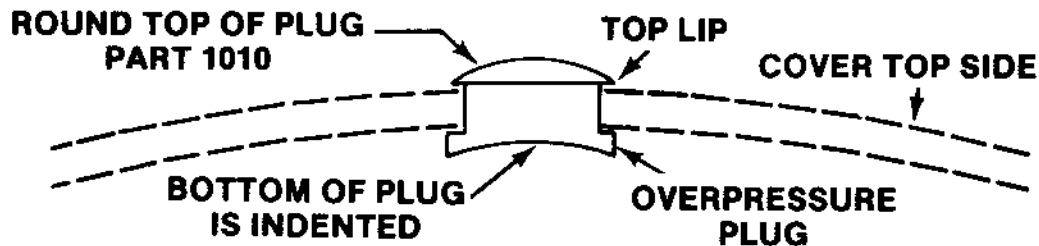


Fig. 7

A WARNING

READ AND UNDERSTAND INSTRUCTION MANUAL BEFORE OPERATING UNIT. IF YOU HAVE NOT BEEN SUPPLIED WITH A MANUAL, ASK FOR ONE. FAILURE TO FOLLOW INSTRUCTIONS AND/OR IMPROPER USE MAY RESULT IN SCALDING, BODILY INJURIES OR EXPLOSION.

1. Never use with blocked, obstructed, broken or missing control valve, pressure gauge, or excess pressure relief valve.
2. Never open under pressure. Be sure pressure has dropped to zero and the control valve toggle is in upright position before loosening any wing nuts. When removing cover, raise the farthest edge first to protect face and arms from steam.
3. Never move a sterilizer while under pressure or hot.
4. Never quick cool unit with water.
5. Never use unit for cooking food. The sterilizer is not intended to be used for cooking any type of food.
6. CAUTION: Both the cover and the body of the sterilizer can get quite hot. Do not touch with unprotected hands/skin.

7. IMPORTANT POINTS TO REMEMBER.

- A. It is very important that your pressure sterilizer be kept clean and that the underside of the cover openings to the pressure gauge (Part No. 72) and excess Pressure Relief Valve (Part No. 2050CS) be regularly examined to determine that this is the case.
- B. Never move the pressure sterilizer from the heat source until all pressure inside the unit has been removed.
- C. Should the pressure sterilizer ever be dropped, the unit must be examined to determine if any damage has occurred. If it is dropped on a hard surface, such as tile or concrete, then the unit must be thoroughly checked inside and out for any damage. You may, of course, return the unit to WISCONSIN ALUMINUM FOUNDRY CO., INC., Factory Service Center, 18th and Franklin Street, Manitowoc, Wisconsin 54220, enclosing a note stating that the unit was dropped and you would like to have it checked out. We will examine the entire unit, including the control valve and gauge, and determine if the unit has sustained damage, and notify you of our findings. We do not charge for this service, except for the return shipping costs.
- D. Never pour cold water directly into the sterilizer when the unit is hot or if the water has boiled dry, as the sudden temperature change could cause the bottom to crack.
- E. Should you have any questions at all about the operation of your ALL-AMERICAN Pressure Sterilizer, please write the Factory Service Center and we will promptly answer your questions.
- F. If you require any spare parts, etc., please let us know and we will send by return mail a parts price list at no charge.

STERILIZER COVER SHOWING LOCATION OF VARIOUS PARTS.

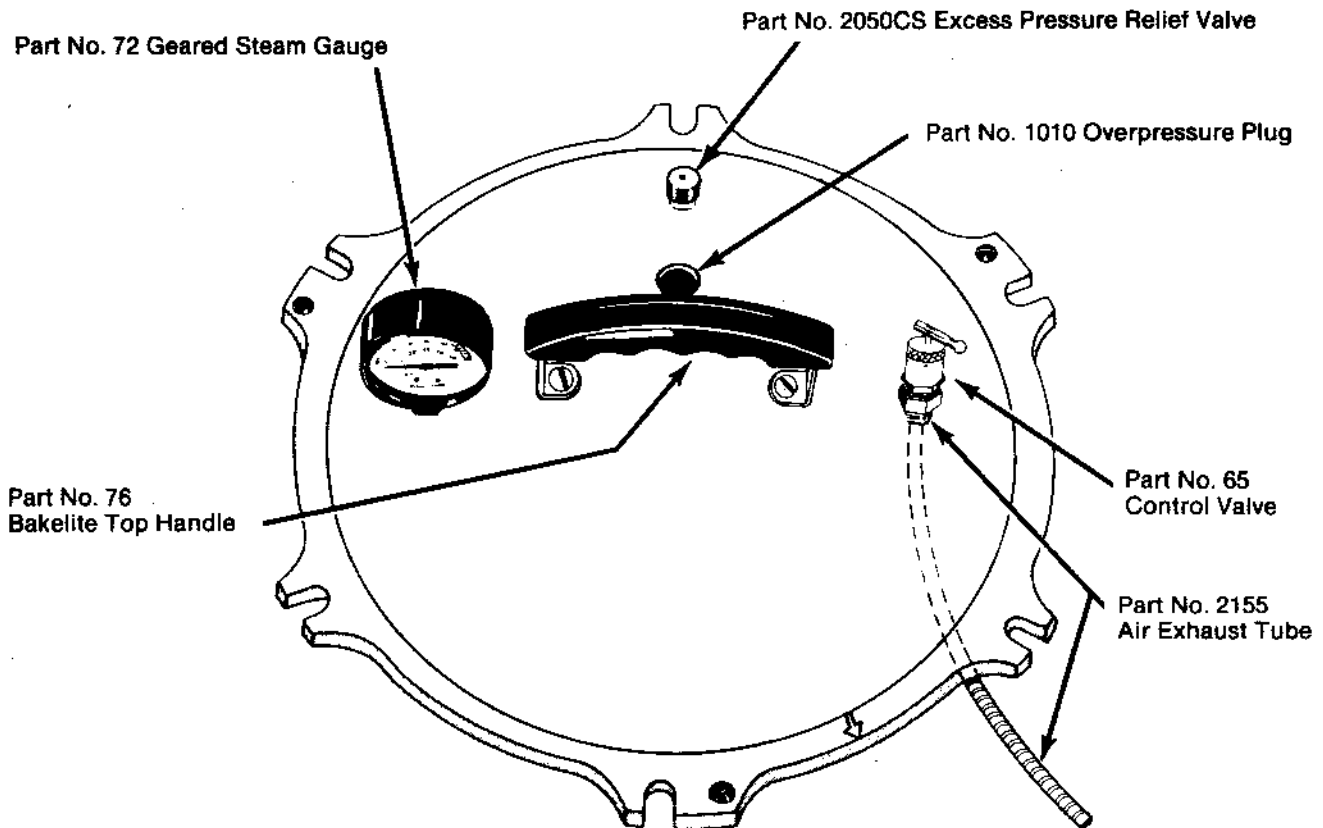


Fig. 8

IMPORTANT STERILIZATION FACTS

Steam is an ideal sterilizing agent since it kills microbes quickly and steam most definitely has the additional important property of self-caused forced penetration. A large volume of steam condenses to a very small volume of water and more steam is drawn in to replace it. This causes excellent penetration of fabrics and some papers and plastic films. Hot air or sterilizing gases do not approach steam in their ability to penetrate.

The greatest cause of sterilization failure is the trapping of air in the material being sterilized so that it cannot escape. When this happens, the air forms a cool air pocket which has a lower temperature than the surrounding steam. It can also form an air-steam mixture which has a lower temperature than the pure steam. The most frequent causes for this failure are dressing packs wrapped too tightly, made too large, failure to turn basins and other metal or glass containers onto their sides, and failure to properly follow the directions as to current sterilizer operation and maintenance. (Please read Item 4, on Page 1 regarding "Exhausting" to remove trapped air.)

It is essential that all sterilizers be regularly checked for proper steam penetration to the center of the load. As the first signal of sterilization failure is a drop in the temperature at the center of the dressing pack or sterilizer load, it is recommended that a temperature measuring device be used at the center of each pack or load of instruments. Indicating tape or strips are no substitute for the self contained types as... "melt indicator inside a small glass vial," as temperature accuracy is essential. The pressure gauge on the sterilizer indicates the approximate temperature at the exhaust line, not at the center of the packs. The gauge cannot indicate the presence of trapped air, therefore, center-of-pack controls or vials are recommended. Different types and brands of sterilization indicators are available from your hospital supply or scientific supply dealer.

PRESSURE GAUGE ACCURACY: The gauges are rated as having an accuracy of 3%-2%-3%. This designates, plus or minus 3% of the full span for the first and last quarter of the dial, and 2% for the middle 50% of the dial.

More specifically, this gauge rating comes from the pressure gauge standard ANSI B40-1-1980. This standard is entitled "Gauges-Pressure, Indicating Dial Type-Elastic Element", and covers every aspect of pressure gauge manufacture and use. The gauge is considered "Accuracy Grade B" in accordance with this specification.

ALL-AMERICAN STERILIZER LIMITED WARRANTY

This quality sterilizer is designed and manufactured to provide many years of satisfactory performance under normal use. Wisconsin Aluminum Foundry pledges to the original owner that should there be any defects in material or workmanship during the first year after purchase, we will repair or replace it at our option. This pledge does not apply to damage caused by shipping. To obtain service under the warranty, please do the following:

- 1) Return sterilizer, shipping prepaid direct to —
Wisconsin Aluminum Foundry Co., Inc.
Factory Service Center
18th and Franklin Street
Manitowoc, Wisconsin 54220

IMPORTANT — PLEASE READ

Any alterations, modifications or changes of any type made to the Sterilizer or to any component thereof will void this warranty!

- 2) Enclose a note telling us exactly what the problem is and indicate from whom and the date the sterilizer was purchased.

Return transportation will be prepaid on all sterilizers in warranty. Repairs made after the warranty has expired will be billed at the current repair costs.

We want you to obtain maximum enjoyment from using this quality sterilizer and we ask that you **take the time to read and follow the operating instructions**. Failure to follow instructions, damage caused by improper replacement parts, abuse, or misuse will void this pledge.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. This is Wisconsin Aluminum Foundry's personal pledge to you and is being made in place of all other express warranties.

WISCONSIN ALUMINUM FOUNDRY CO., INC.
MANITOWOC, WISCONSIN 54220
PHONE: (414) 682-8627
FAX: (414) 682-4090

NEVER USE ANYTHING BUT GENUINE ALL AMERICAN REPLACEMENT PARTS.

Replacement parts list available at no charge, please write for copy.



Model No. 1915X
Pressure Steam Sterilizer



Model No. 1925X
Pressure Steam Sterilizer



Model No. 1941X
Pressure Steam Sterilizer

WISCONSIN ALUMINUM FOUNDRY CO., INC.
P.O. Box 246 MANITOWOC, WISCONSIN 54221-0246
PHONE: (414) 682-8627 FAX: (414) 682-4090

Manufacturers of...

ALL AMERICAN® STERILIZERS

Factory Service Center: 18th and Franklin Street
Manitowoc, WI 54220