

Pasteurizer Instruction Manual



P3000
(Aluminum)



P3050SS
(Stainless Steel)

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Hamby Dairy Supply

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The SafGard Pres-Vac Home Pasteurizer

The SafGard is engineered to include features of the finest commercial pasteurizers ...

Your new SAFGARD PRES-VAC Home Milk and Cream Pasteurizer has advanced features not found in any other home pasteurizer. Its new principle of pressure pasteurization is based upon the design of the newest and finest commercial pasteurizers. Only the largest dairy plants have pasteurizers that operate on the same principle as your new SAFGARD. This new idea in pasteurization gives you better tasting milk in less time and with less effort.

*Your new **Safgard** features:*

- Pressurized Heatings - as in newest and finest commercial pasteurizers
- assures complete bacteria kill without overheating or change of flavor.
- Vacuum Cooling to seal in natural flavor and vitamins.
- All-Over Water Bath for more uniform and faster heating and cooling.
- Automatic Control of temperature and time.
- Light-weight Aluminum and Stainless-Steel Construction.
- Small or Large Family Capacity - any amount up to 2 gallons.

Laboratory-Tested for Effectiveness

Destroys bacteria in Milk and helps preserve the natural flavor. ..

In the Dairy Technology laboratories of the University of Illinois the SAFGARD PRES-VAC Home Pasteurizer was put through numerous tests to measure its effectiveness in destroying bacteria and the effect which pasteurization of milk in this unit has on *cream content* and *flavor*. The results do not constitute an endorsement of the SAFGARD PRES-VAC Home Pasteurizer by the University. They do however indicate the efficiency of this equipment. Here are the results:

TABLE I
How Well the SAFGARD PRES-VAC Home Pasteurizer Destroys Bacteria

Experiment No.	Raw Milk	Pasteurized Milk	Percentage Destroyed
Bacteria per cubic centimeter (about 1/1000th part of a quart)			
1	25,000	400	98.4
2	28,000	90	99.7
3	17,000	120	99.3
4	12,000	80	99.2
5	110,000	4,400	96.0
6	1,900,000	4,800	99.8
7	238,000	4,100	98.3
8	890,000	900	99.9

The raw milk in experiments 5, 6, 7 and 8 had more bacteria than you would find in freshly drawn milk. The raw milk in the other experiments more nearly contained the numbers of bacteria that you would find in freshly drawn milk at the farm. However, you must remember that only a few bacteria in raw milk do not make it safe to drink. It can still be dangerous. Regardless of the numbers of bacteria in the raw milk, the SAFGARD PRES-VAC Home Pasteurizer destroyed about 96 to 99.9 per cent of them, and this is about the killing efficiency of pasteurizers used in large commercial milk plants.

TABLE II
The Phosphatase * Tests of Milk Pasteurized with the SAFGARD PRES-VAC Home Pasteurizer

Experiment No.	Underneath Surface of Cover	Edge of Milk Container	Milk**
1	0 Units	0 Units	0.82 Units
2	0 Units	0 Units	0.12 Units
3	0 Units	0 Units	0.60 Units
4	0 Units	0 Units	0.36 Units
5	0 Units	0 Units	0.12 Units
6	0 Units	0 Units	0.00 Units
7	0 Units	0 Units	0.24 Units
8	0 Units	0 Units	0.00 Units

*This most sensitive of all tests is used by commercial milk plants and is recognized as the most accurate by health authorities throughout the United States.

**Less than 2 units is satisfactory for milk.

The results in Table II show that the underneath surface of the cover and the pouring edge of the milk container and every particle of milk are heated sufficiently to destroy all bacteria that are known to produce disease. These experiments prove that the SAFGARD PRES-VAC Pasteurizer can provide safe milk for everyone and that it is possible to pasteurize small batches of milk at home with little effort. Due to the prevalence of brucellosis, commonly called undulant fever, farmers and others who drink raw milk are always exposing themselves to this disease. They cannot afford to be without a SAFGARD PRES-VAC Pasteurizer.

TABLE III
The Amount of Cream You Can Expect to Get from Milk Pasteurized with the SAFGARD PRES-VAC Home Pasteurizer

Cream is given in cubic centimeters			
Experiment No.	Raw Milk	Pasteurized Milk	Visible Percentage
1	14.0	13.0	93.0
2	14.0	12.0	85.7
3	14.5	13.0	89.6
4	14.5	11.5	79.3
5	15.0	14.0	93.3
6	16.0	14.5	91.0
7	13.0	10.5	80.8
8	13.5	12.0	88.9
Average 87.7			

The temperature in your SAFGARD PRES-VAC Pasteurizer is so carefully controlled that you will get almost as much cream from the safe pasteurized milk as from unsafe raw milk. The reason why properly pasteurized milk usually shows less cream than raw milk is because the fat globules form smaller clusters, which pack more closely in the cream layer. Also, some of the fat globules in pasteurized milk do not form clusters but they remain in the bulk of the milk below the cream layer and rise very slowly. It is important to remember that not a single drop of cream is destroyed by pasteurization. The food value of milk is not hurt by pasteurization.

TABLE IV
Flavor Tests of Milk Pasteurized with the SAFGARD PRES-VAC Home Milk and Cream Pasteurizer

Experiment No.	Flavor Comments on Raw Milk	Flavor Comments on Pasteurized Milk	Flavor Score of Pasteurized Milk
1	Excellent	Excellent	40.0
2	Good	Good	39.5
3	Fair	Fair	37.5
4	Excellent	Excellent	40.0
5	Good	Good	39.0
6	Poor	Poor	35.0
7	Good	Good	38.5
8	Excellent	Excellent	40.0

*American Dairy Science Association score card used with 45 being a perfect score. The fine flavor in raw milk is not changed by pasteurizing it in the SAFGARD PRES-VAC Home Pasteurizer. However, you must remember that in order to obtain good, natural flavored pasteurized milk, it is absolutely necessary to have raw milk which is free from objectionable flavors and odors. This is shown in Experiment 6 where the raw milk had an unpleasant acid flavor which was found also in the pasteurized milk.

How to Operate the SafGard

The following operating instructions for your SAFGARD PRES-VAC Pasteurizer were worked out with the help of many farm homemakers like yourself. We called upon them to help us give you a pasteurizer that will be easy to use. If you have any suggestions or comments that you feel would be helpful, we would certainly appreciate hearing from you.

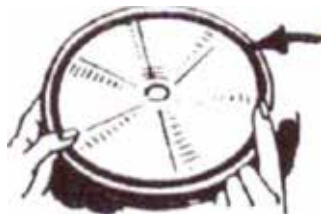
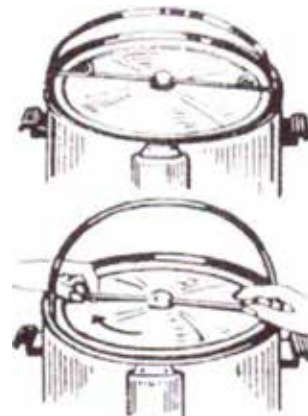
While it may seem that the following instructions are rather long, it is simply because we explained every operation in detail. Once you start using your new SAFGARD you will notice that all of these operations are very simple and natural.

Unpacking your Pasteurizer

When unpacking your new SAFGARD Pasteurizer, take careful notice of how the various parts fit together. The pasteurizer as it comes to you is assembled properly for pasteurization (with exception of top cover knob which must be attached, and the water hoses connected).

1. After removing the top cover from the pasteurizer, notice especially how the milk container cover is clamped down by the pressure cover lock. You will find that the ball is centered in the small hole in the top of the milk container cover.

2. Raise milk container handle. Grasp pressure cover lock firmly and turn clockwise to remove. This releases milk container from positioning brackets in pasteurizer.



3. Lift out milk container and remove cover. Notice how flavorseal gasket fits firmly into groove on milk container cover.

4. Before pasteurizing, clean the various parts of your SAFGARD Pasteurizer.

5. Your inlet and outlet hoses are packed in the milk container .



Pres-Vac Pasteurizer

Note: Pasteurizing process varies depending on milk temperature

Operating

1. Fill milk container with milk or cream - any amount up to two gallons in P-3000 or 5 quarters in P-3000



2. Set milk container in pasteurizer.
3. Place milk container cover on milk container.



4. Set pressure cover lock on top of milk container cover so that ball is centered in vacuum relief hole. Grasp pressure cover lock firmly using circular finger grip. Press down and turn until locking arms are positioned securely under positioning brackets on inside of pasteurizer.



5. Plug small rubber stopper into end of outlet hose.



6. Slip other end of outlet hose over protruding zinc fitting on outside of pasteurizer.

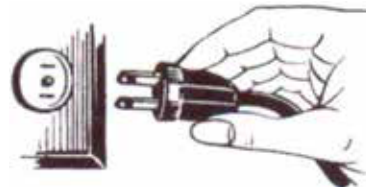
7. Using inlet hose, fill pasteurizer with water to the top of the milk container (not over the lid). By using warm tap water, time of pasteurizing can be reduced considerably.



Note!

Tests have shown that two full gallons of milk can be pasteurized in as short a time as *24 minutes*.

8. Place pasteurizer cover on pasteurizer and plug line cord into 110 volt 60 cycle A.C. base or wall outlet. You can now go about your other work without worrying about your SAFGARD Pasteurizer.



Points to Remember

1. Pasteurize the milk as soon as possible after milking. It is not necessary to cool the raw milk, if it pasteurized within two hours. Warm milk can be pasteurized faster than pre-cooled milk. This prevents the multiplication of bacteria.
2. Cool the pasteurized milk as quickly as possible and to as low a temperature as possible.
3. Cool the milk with only pure water that you know is safe for your family to drink.
4. Wash and rinse your pasteurizer immediately after you get through using it. Use only approved washing materials.
5. Twice each month check the temperature of the milk immediately after the buzzer sounds. It should be not less that 156 degrees F. at the top of the milk container. (*See thermostat Adjustment Instructions on page 6.*)
6. Take care of your SAFGARD Home Milk and Cream Pasteurizer as you would any other precision electrical appliance such as your electric toaster, broiler, etc. Rough handling not only may dent the containers but also may affect the operation of the pasteurizer. Every two weeks brush the inside of the water container and the heating coil with the wash water that you use for the milk container.



Cooling

Note: Pasteurizing process varies depending on milk temperature

1. When pasteurizing cycle is completed, the pasteurizer will turn off automatically and a loud buzzer will sound. This is your signal to return and remove line cord from the wall outlet IMMEDIATELY.
2. Remove small rubber plug from the outlet hose and allow hot water to drain into sink. Remove top cover from pasteurizer and insert inlet hose between milk from pasteurizer and insert inlet hose between milk container and outer container - be sure hose is pushed well down toward bottom of pasteurizer. Place inlet hose on cold water tap and turn cold water on gradually. Allow cold water to circulate around milk container until milk is cooled to approximately tap water temperature. Use only clean water that is suitable for drinking.
3. Remove milk container from pasteurizer and store in refrigerator. Be sure to replace pressure cover lock so that milk container is sealed while in the refrigerator.

Cleaning

1. Milk container, milk container cover, flavor seal gasket and pressure cover lock should be thoroughly cleaned after each use with hot water and a good household detergent. The flavor-seal gasket can be removed from milk container cover by using a table knife. Avoid using a sharp instrument for this purpose, because it may puncture gasket. Thorough cleaning is necessary to prevent formation of milk stone. Do not use table soda, strong soaps or lye. Rinse with hot water and dry these parts thoroughly.
2. The water container also should be emptied and wiped dry with a clean cloth after use. Every two weeks brush the inside and the heating coil with the wash water you use for the milk container. CAUTION: Under no conditions should the pasteurizer be submerged in water.
3. The inner and outer pail must be cleaned and dried after each use, especially if unconditioned water is used to eliminate pin holes from forming in the aluminum pails.

Thermostat Adjustment

1. Twice each month check the temperature of the milk. After the buzzer sounds, before starting the cooling, let the hot water run out until it is level with outlet hose connection and remove milk container cover lock. Insert a dairy thermometer through the hole of the milk container cover. Milk temperature should register 156 degrees - 159 degrees F. at top of milk container.



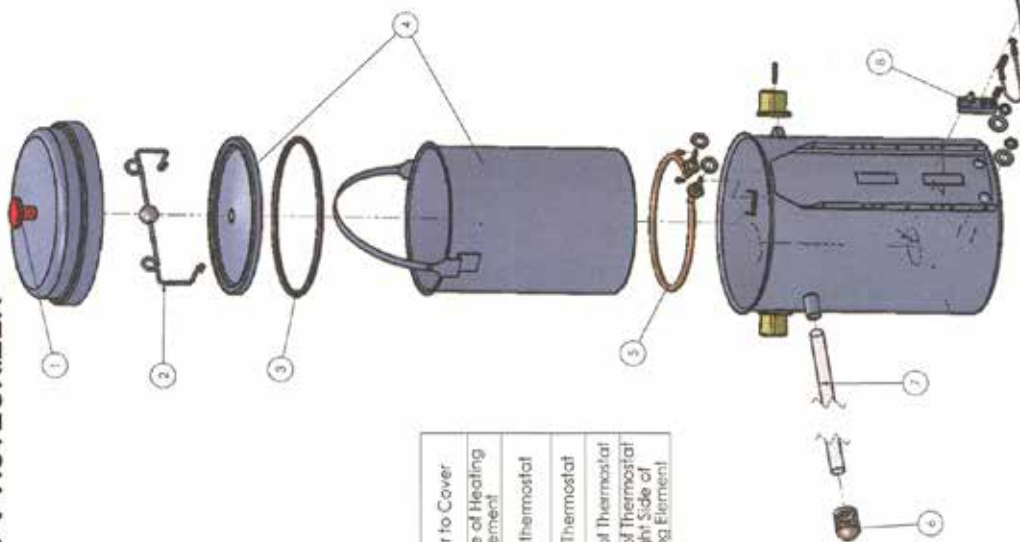
2. If temperature is too high or too low, insert screw driver through small hole in front panel and turn adjusting screw as shown here - to *right* (clockwise) to raise temperature - *left* (counter clockwise) to lower temperature.

Note!

CAUTION: This thermostat is very sensitive. A slight change in the adjusting screw will alter the temperature several degrees. Turn screw only a fraction of a turn at a time.

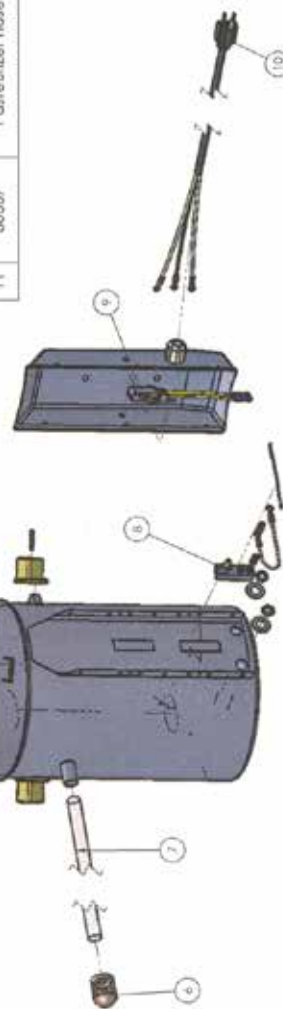
110v Kleen Flo Pasteurizer Diagram

30500 110v KLEEN FLO PASTEURIZER



Green Power Cord Wire	Buzzer to Cover
Black Power Cord Wire	Left Side of Heating Element
White Power Cord Wire	Top of Thermostat
Yellow Buzzer Wire	Top of Thermostat
Yellow Buzzer Wire	Bottom of Thermostat
Short White Connecting Wire	Bottom of Thermostat to Right Side of Heating Element

ITEM NO.	PART NO.	DESCRIPTION	QTY.
1	96000	Red Knob for Pasteurizer lid, copy	1
2	30575	Inner bucket lid latch with ball for pasteurizer	1
3	99715	O-ring for Pasteurizer	1
4	30555	Pasteurizer Inner bucket	1
5	30560	Heating Element for Pasteurizer - 110V	1
6	56379	3/4" pipeline nipple closure, BROWN	1
7	25235	5/8" clear tubing (per foot), Gilflex	1
8	30568	Thermostat for 110 volt pasteurizer	1
9	30569	Buzzer for 110 volt pasteurizer	1
10	30572	Power cord for 110 volt pasteurizer	1
11	30567	Pasteurizer hose with faucet adapter	1



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Parts List

P-3000 Pasteurizer 110 V - Part# 26710

Cover Lock	Connector
P-3000 Pasteurizer (11 OV)	Outlet Hose Connector
Shipping Carton	Gasket
Milk Cover	Stopper
Outer Cover	Element 11 OV
Outer Cover Knob	Element Gasket
Front Panel	Buzzer
Milk Pail	5 Foot cord
Outer Container Only	Clamp
Thermostat	Handles
Retainer	Intake Hose
Milk Pail Gasket	Floating Dairy
Outlet Hose	Themometer

P-3000 Pasteurizer 220V - Part #26710-1

220 V Heating Element
Resistor
Terminal Block

*All other parts the same as for 26710- P-3000

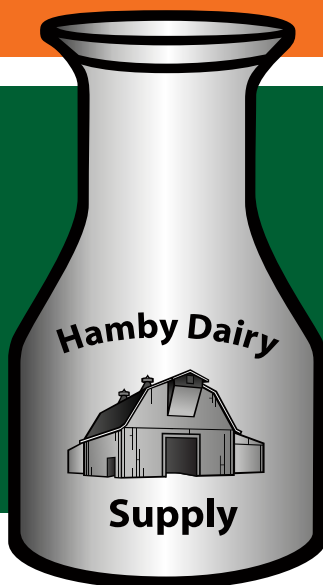
P-3000 Pasteurizer Dual Voltage - Part #32846



Switch for Dual Voltage

*All other parts the same as for 26710 - P-3000

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Parts Available for Pasteurizers

Manufactures:

Kleen-Flo Company

Hoegger Supply Company

Schlueter Company

Supply

www.hambydairysupply.com

www.surgemilker.com