

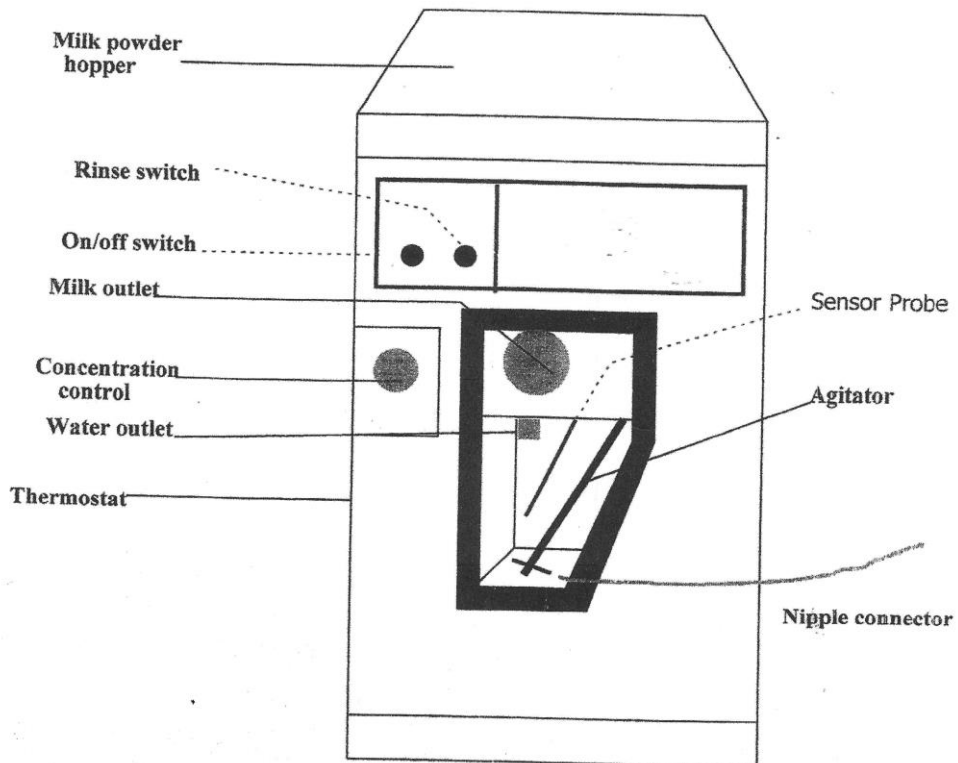
# BIOTIC

INDUSTRIES INC.

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## LAC-TEK

## LAC-TEK II



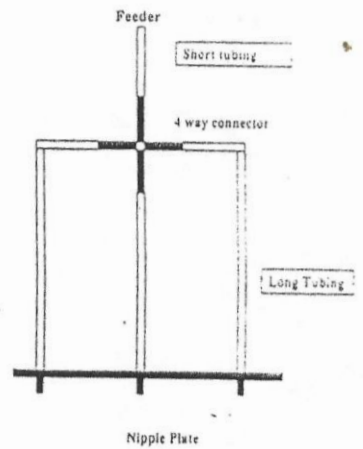
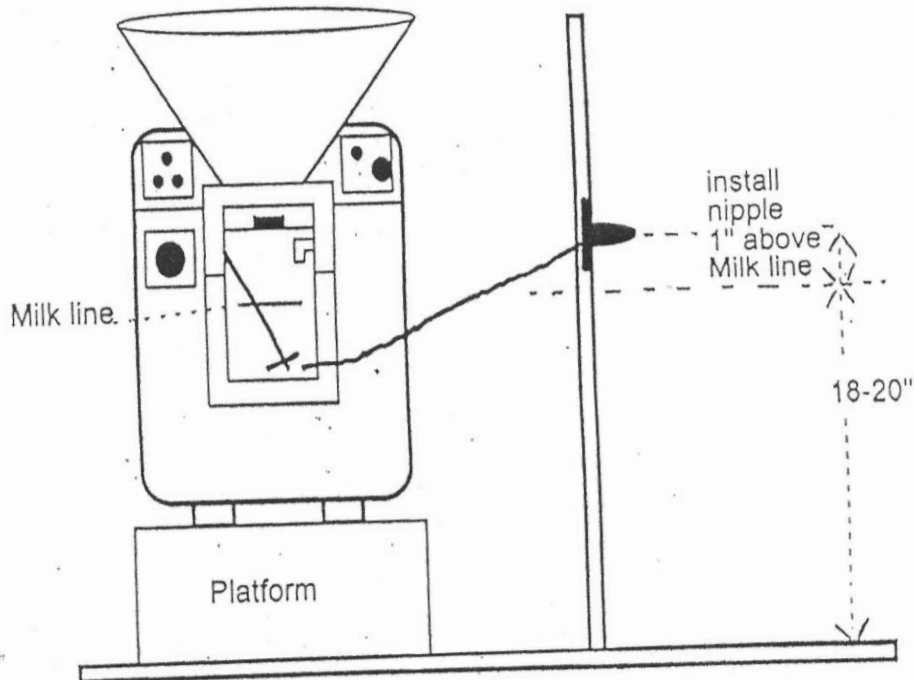
# AUTOMATIC MILK FEEDING

# SUGGESTED HOUSING LAYOUT

Pen #1  
12' X 20'

Pen #2  
12' X 20'

Dwarf Wall



The operator's satisfaction with this unit will depend to a great extent on his management of other factors involved in the raising of young animals, such as proper housing, good sanitation practices, control of diseases and types of milk replacers/formulas used. All these factors, including the number of lamb/calves on the LAC-TEK should be considered in selecting the proper location and setting up the machine. All advice given in this manual is intended to serve as a guideline only.

## SAFETY PRECAUTIONS

### **Read this section carefully before proceeding.**

Before connecting the electricity, make sure that the Main Switch (on/off) is on the off position and THE THERMOSTAT IS SET AT ZERO.

Do not open the control panel without removing the electric plug from the socket. Shut off the main power source (breaker) before attempting this.

When filling up the hopper, make sure that there is no foreign matter (measuring cup, string, paper, etc.) in the powder.

Note: All references to measurement are in U.S. followed by the metric equivalent.

## SPECIFICATIONS

The LAC-TEK is an automatic dispenser designed to provide a constant, uniform and easily accessible supply of milk replacer/formula for various domestic animals such as calves, lambs, and kids.

The machine automatically mixes small quantities of powdered milk replacer/formula with warm water at a desired concentration. The animals take the mixed liquid by means of a rubber nipple.

The machine consists of a hopper, water tank and heater, mixing bowl with outlets for the nipples and an electro-mechanical system which mixes the powdered milk substitute and water in desired proportion and temperature. The mix is made in batches. When the milk level goes below the sensor, the feeder starts a new batch.

The water enters the heating tank via a valve where it is heated by a thermostatically controlled element.

The concentration of the mix is regulated in the following manner:

The milk replacer flow is always constant.

The water flow to the mixing-bowl is adjustable.

	LAC-TEK	LAC-TEK II
Capacity	: 60 lambs or kids	120 lambs or kids
Number of nipples	: 6 for lambs and kids	12 for lambs and kids
Capacity of hopper	: 25 lbs. (11 kg)	50 lbs. (22 kg)
Capacity of water tank	: 2.5 gal. (10 l.)	2.5 gal. (10 l.)
Current rating	: 110volts, 1500 watts	110 v or 220 v, 1500 watts
Power requirement	: 17 amps	18 amps, 9 amps
Shipping Box size	: 20X22X30" (50X55X75 cm)	

## INSTALLATION OF THE LAC-TEK

### Site:

The maximum number of lambs to a machine is determined more by environmental and husbandry considerations, rather than the capacity of the machine. Our general recommendation per unit is 60 lambs, managed in good housing conditions.

Ideally, the LAC-TEK should be located in a recess to afford easy access for daily cleaning and maintenance (see diagram).

Install the LAC-TEK in the access passage adjoining the lamb pens. The distance from the nipple outlets on the LAC-TEK to the nipples on the wall of the pen should be no greater than 3 feet (1 meter). Locate the nipples about 14 inches up from the floor of the pen.

The LAC-TEK must be placed so that the nipples are about 1 inch (2.5 cm) above the level of the milk in the mixing bowl. In most cases a platform will have to be used for the LAC-TEK to achieve the proper height.

### Water:

The ideal water pressure for the LAC-TEK lies between 10 p.s.i (0.8 kPa) to 80 p.s.i. (5.50 kPa). A garden hose connection is ideal as it supplies an adequate water flow to the LAC-TEK.

### Electrical:

Electricity connection must be via a 15 amp plug and socket with a 15 amp breaker. The LAC-TEK will have to be plugged into a 110 or 220 outlet

## OPERATION

After installation has been completed, operate the LAC-TEK without milk replacer/formula powder in the hopper until you are thoroughly familiar with the function of each part of the machine.

### **Do not plug the machine to electricity**

1. Connect water hose to feeder. Open main water faucet all the way. Check lines and fittings for water leaks.

### **2. MAKE SURE THE THERMOSTAT IS IN THE OFF POSITION.**

Now plug the machine in. Water should start filling up water tank. Wait until the water tank is full (About 5 minutes)

3. Turn main switch to the ON position. Water is coming into the mixing bowl, the mixing motor .When the water reaches a certain level, and everything stops.

4. Turn the thermostat to the 30-40 degrees Centigrade position. (37°C = 98.6°F). The red light is on and will go off when the water reaches the desired temperature.

5. Turn POWDER/RINSE SWITCH to powder position.

6. Drain the mixing bowl by removing one hose from the nipple. When the water level goes below the sensor level the machine starts again. The powder and mixing motor are running and water fills the bowl.

Reconnect hose. (If machine does not start or overflows see Trouble Shooting).

Repeat this procedure until you are familiar with the operation of the LAC-TEK.

7. You are now ready to calibrate your LAC-TEK.

## CALIBRATION OF THE LAC-TEK

First fill the hopper with milk replacer and connect water source to machine, then allow water tank to fill (water will automatically stop when tank is full, leave YOUR water source on).

\*MAKE SURE THERE ARE NO CUPS OR OTHER FOREIGN MATERIALS IN THE MILK\*  
\*REPLACER\*

### **To calibrate the feeder you will need:**

\*\*Measuring cup

\*\*Scale (kitchen scale work great)

\*\***Powder milk to water ratio**

Found on the milk replacer bag.

You will need to know if you have 1 ounce of milk replacer, how many ounce of water you need to add to have the right concentration for your animal

(Usually for calf: 1oz of powder to 8oz of water, kid 1 to 5, lamb 1 to 4)

### **Calibration:**

1. Turn POWER switch OFF.
2. Turn POWDER switch to POWDER.
3. Hold a container under the powder tube to collect the powder and keep it from mixing with the water
4. Turn POWER switch ON (water will fill up the mixing bowl and stops)
5. Drain the mixing bowl of all liquid until the feeder starts again. (The LACTEK will start again when the sensor probe is not touching water or milk replacer)
6. Turn the POWER switch to OFF.
7. Weigh Powder. Write down the weight (for example 1.5 oz.)

To find the quantity of water multiply the weight of powder by the ratio

(For example: ratio 1 to 5 so 1.5 oz.  $\times 5 = 7.5$  oz.)

(The quantity of powder is always the same and cannot be adjusted.)

#### **Adjusting the water**

1. Turn POWER switch OFF.
2. Turn POWDER switch to RINSE.
3. Drain water for mixing bowl until the feeder start
4. Hold the nipple hose high so the water does not drain.

5. Wait for the feeder to stop.
6. Turn POWER switch OFF.
7. Drain water in a measure cup.

The amount of water must be equal to the amount you find by multiplying the weight of powder by the ratio. (In our example 7.5oz)

Turn the Red Knob to have the correct amount.

Turning the Red Knob clock wise will decrease the water, counter clockwise increase the water.

Repeat **adjusting water** until you have the correct amount

Note: \*Don't forget to weigh the measuring cup first and subtract that from the weight of the cup and the powder.

WHEN DESIRED CONCENTRATION IS ATTAINED, TURN ALL SWITCHES ON

\*It is **IMPORTANT** that your milk replacer/formulas are weighed in calculating the desired\* concentrations. Not all milk replacer/formulas have the same bulk densities. Weights can also vary due to compaction of the milk substitutes, this is controlled by the milk replacer

\*manufacture and packaging company NOT by BIOTIC Industries Inc.\*

## MAINTENANCE

The importance of thorough daily cleaning and regular maintenance cannot be over-emphasized. Clean bowl, nipple hoses, nipples, and nipple-plates daily.

For the daily cleaning operation, shut the machine off. See that a lamb drains the bowl to reduce waste.

Disconnect the nipple tubing from the nipple connectors. Turn the POWDER SWITCH to the rinse position and allow warm water to circulate in the mixing bowl. Drain waste water into a suitable container. (A safe dairy cleaner-sanitizer solution can be used). All parts exposed to the liquid milk substitute should be thoroughly cleaned and rinsed.

### **CAUTION:**

Turn off the main switch before removing the bottom part of the mixing bowl cover, then clean the bowl and bowl covers with a soft sponge or soft bristle brush.

Inspect the agitator blade to be sure no foreign material has collected around the blade or shaft.

Make sure that the opening in the bowl for the milk powder is clean and free of any foreign objects.

**DO NOT WASH THE PANEL BOARD WITH WATER: YOU COULD RUN THE RISK OF A SHORT-CIRCUIT.**

Do not let the LAC-TEK run out of milk replacer/formula as young lambs tend to scour when drinking plain warm water. Should the LAC-TEK become inoperative and the lambs become very hungry, control feed them until they are over their hunger as over-eating will also tend to make them scour.

## STORAGE

When the LAC-TEK is to be inactive or stored, for even a day, it is important that all the above cleaning and maintenance steps be performed and all feed should be removed from the hopper.

The water tank in the LAC-TEK should be drained, particularly if the LAC-TEK is shut-off, stored, or in the event of a power-failure during freezing weather. To do this, simply remove the drain plug in the bottom of the tank.

## HOUSING

The LAC-TEK is versatile and adaptable. It can be used in many existing farm buildings with a minimum of conversion costs.

A good building should be peaceful and comfortable, i.e. stress free.

Exposure to drafts, wet and humid conditions, as well as sudden changes in temperature should be avoided as they can be a major contributor to mortality.

Provide for your lambs dry, clean, and sanitary group pens of sufficient size.

This machine is not designed to be used in locations where it may be exposed to the weather.

## TRAINING THE ANIMALS

Animals can be trained on the machine after three days of colostrum.

Teach the animals to drink from the LAC-TEK by showing it the nipple and that it can get milk. Watch animals the first few days to assure that they are nursing.

In the following days, it is not necessary to force the animals to feed; unless a lamb has never fed from the LAC-TEK, it will come back to feed again when it is hungry, and it will not be necessary for you to intervene. All you have to do is check and be sure that all the animals have fed from the machine at least once.

## WHITE VEAL CALVES

### CAPACITY

10 to 15 calves per LAC-TEK

### MILK REPLACER/FORMULA

Use products designed for a white veal program.

Feed no grain or hay as this is an all milk diet.

It is critical that you choose the right calf for success. Attention must be paid to the breed, age, starting weight and the state of health of the calf.

The first 24 hours of your feeding program is important. In most cases the calves should be allowed to rest for 4 to 6 hours. At this point they can be introduced to the LAC-TEK, with then milk concentration set to 2.8 to 3 ounces of powder per quart of water (80 to 90 gm per liter). for their first feed, restrict their milk intake to 1 to 1.5 quarts (.9 to 1.4 liters). If the majority of calves have drank satisfactorily after the first supervised feeding, they can be allowed free access to feeder.

It is important to note that from a management point of view, to gradually increase the milk concentration in stages, rather than one large one.

## LAMBS / KIDS

Instructions for lambs apply also for kids

CAPACITY: 60 lambs or kids

### EQUIPMENT:

LAC-TEK for lambs comes supplied with 3 kid/lamb panel. Each kids/lambs panel consist of 2 recessed nipples with appropriate accessories for their hook-up to the LAC-TEK. Lambs panels can be separated for individual requirements.

NIPPLE HEIGHT: 13 to 17 inches from floor (33 to 43 cm)

### MILK REPLACER:

Use milk replacer designed for lambs. Calf milk replacers are not recommended because they do not meet the nutrient specifications for lambs.

### MILK CONCENTRATION SETTING:

Remains the same from the first day to weaning. Set between 6 to 7 ounces per quarts of water (180 to 200gm/liter). Depending on the nutritive value of your milk replacer.

MILK TEMPERATURE: 40øC (100øF)

### SITE:

Allocate a minimum of 5 square feet per lambs (0.45 square meters). It is best to have no more than 20 or less lambs in a group.



## MANAGEMENT TIPS FOR LAMBS OR KIDS

- Provide a warm, dry, draft-free area to start lambs.
- Make sure lambs received colostrum.
- Lambs should be removed as young as possible from sight of the ewe.
- Lambs then should be left several hours without feed before being introduced to feeder.

Teach lambs to nurse. This may take 4 or 5 tries. Check lambs during the next two days to ensure that all are drinking successfully.

Lambs should be grouped according to sizes to avoid unnecessary competition with older and larger lambs. Days old lambs should not be penned with lambs over a week old.

During the period when newborn lambs are being trained to nurse, it is desirable that they maintained close to feeding station. Provide about 2 square feet per lambs(.2 square meters)

Hang light over the feeding station. Lambs will be attracted by the light and will adapt more quickly to the feeding system.

Provide ample fresh water at all time.

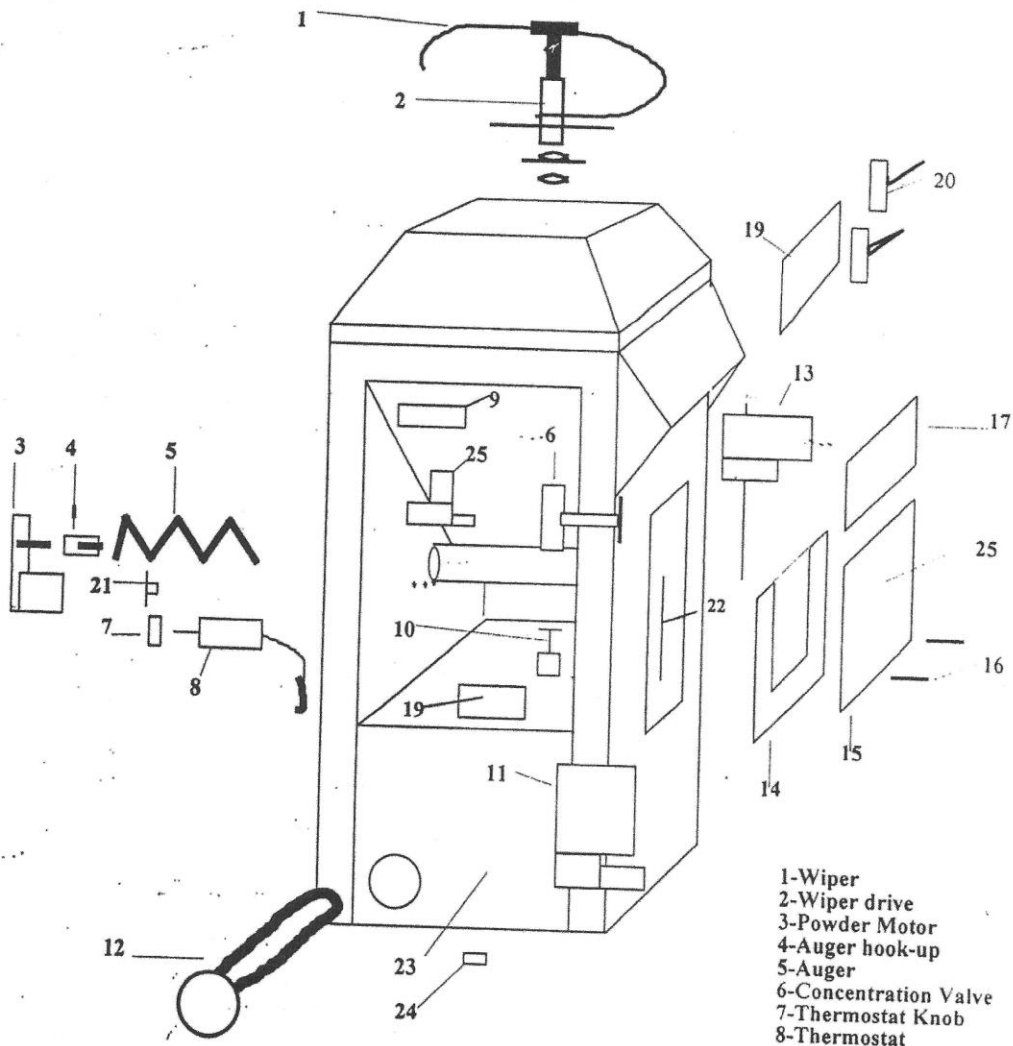
Start lambs on high-quality starter at two weeks of age.

Wean at 30 to 35 days of age or about 25 lbs. of weight (11 to 12 kg.) when lambs are eating starter well.

Clean the milk replacer feeding system and utensils regularly and always use sanitary methods.

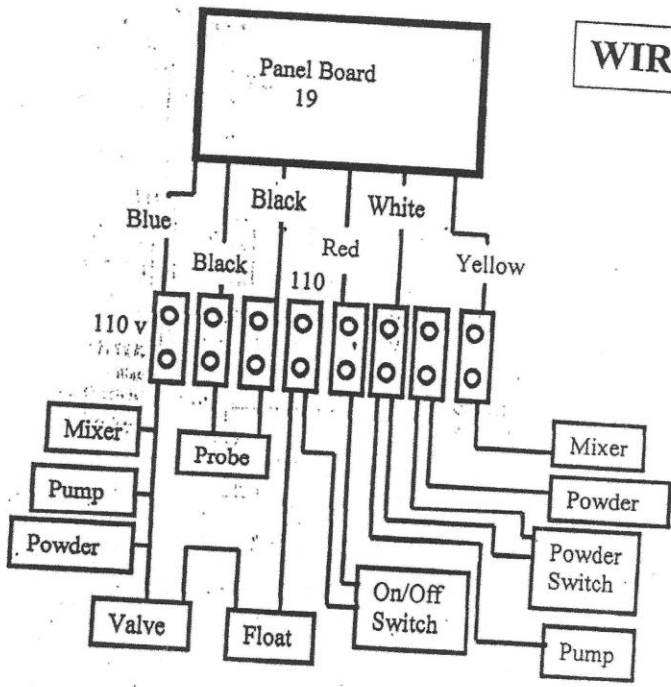
### LIABILITY DISCLAIMER

Individual results from the use of this machine may vary due to management, environment, genetics, type of milk replacer/formula used, health and sanitation. Therefore, Biotic Industries, Inc. does not warrant or guarantee individual results.



- 1-Wiper
- 2-Wiper drive
- 3-Powder Motor
- 4-Auger hook-up
- 5-Auger
- 6-Concentration Valve
- 7-Thermostat Knob
- 8-Thermostat
- 9-Wire Connector
- 10-Float Switch
- 11-Water Pump
- 12-Heating Element
- 13-Mixing Motor
- 14-Bowl gasket
- 15-Bowl Cover Bottom
- 16-Nipple Hose Connector
- 17-Bowl Cover Top
- 19-Panel board for probe
- 20-On/Off Switch
- 21-Red Lamp
- 22-Probe
- 23-Water Tank
- 24-Drain Plug
- 25-Water Valve

**WIRING**



## TROUBLE SHOOTING

CAUTION: DO NOT OPEN THE SIDE PANEL WITHOUT FIRST TURNING OFF POWER TO THE MACHINE.

- |  |  |
|--|--|
| *. Feeder do not start                                   | - Breaker off<br>- Machine unplugged<br>- Switch is off<br>- Bowl full   |
| *. No water but powder and Agitator motor working        | - No water going to feeder (faucet shut, etc.)<br>- Concentration knob turned clockwise all the way<br>- Valve filter dirty<br>- Inlet valve defective (replace) |
| *. Mixing bowl filled with powder                        | - Same as above  |
| *. A small amount of water Flowing into bowl             | - Water tank pump dirty<br>- Check water supply  |
| *. <b>No powder but water and Agitator motor working</b> | - Powder switch on rinse<br>- Powder motor stuck<br><b>-Auger unhooked</b><br>- Powder motor defective (replace)   |
| *. Mixing motor not working                              | - Mixing motor dirty<br>- PC Probe defective (replace)<br>- Mixing motor defective (replace)   |
| *. Mixing motor does not stop                            | -PC Probe defective (replace)  |
| *. Milk overflows, feeder does not stop                  | -Too much water turn concentration knob down<br>-PC Probe defective (replace)  |
| *. Water too warm  | - set thermostat to 40øC<br>- Thermostat out of order (replace)  |
| *. Water does not heat up                                | - set thermostat to 40øC<br>- heating element burned up (replace)  |



## WARRANTY

BIOTIC INDUSTRIES, INC. warrants that automatic feeding system number \_\_\_\_\_ has been factory calibrated and tested and is free of defects. Biotic Industries, Inc. will replace any part or parts that fail due to defective material or workmanship within six months from date of delivery provided the warranty card is duly filed within ten (10) days of purchase.

We reserve the right to change specifications or design without notice. Any parts contained in your unit that are different than those listed in this book were changed either to improve your unit or were necessary due to material substitutions.

BIOTIC INDUSTRIES, INC. reserves the right to determine cause of failure and the owner agrees to return defective parts to the factory upon request, shipping charges prepaid.

This warranty is not transferable.

## WARRANTY REGISTRATION CARD

**NOTICE:**

This form must be completed and returned within ten (10) days of delivery to validate the warranty.

Name of Owner: \_\_\_\_\_

Address of Owner: \_\_\_\_\_ City \_\_\_\_\_  
State: \_\_\_\_\_ Zip \_\_\_\_\_

BIOTIC INDUSTRIES, INC. automatic animal feeding system

Serial No: \_\_\_\_\_

The primary application of this machine will be:  
Replacement heifers \_\_\_ Veal \_\_\_ Lambs \_\_\_ Other \_\_\_\_\_

Dealer: \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Owner: \_\_\_\_\_

Mail to:       BIOTIC INDUSTRIES, INC.  
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                  Bell Buckle, TN 37020   USA