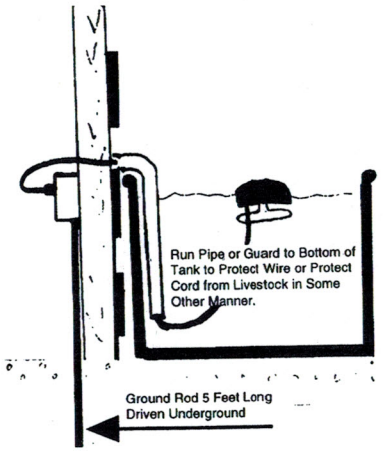
IMPORTANT CONSUMER INFORMATION
(Read Carefully and Entirely)

1. **The Models H–4810 and H–4815 are <u>not</u> safe in Plastic or Structural Foam Stock Tanks. Do not use them.**
2. The Models DPH–15, UPH–15, H–418, H-418C, H–419, H–49, H–4615, P–418, P–500, H–429, H–439, H–493, C–50, C–250, C–500, and W–449 are **<u>all</u>** safe to use in Plastic, Structural Foam and Metal tank applications and all pond designs - liners, and pre-formed plastic.
3. De-icers will "only" operate when temperature reaches freezing.
4. Caution: Electricity and water are a dangerous combination–**follow installations carefully and precisely.**
5. All the units (except the Model W–449) are De-icers (designed to keep water de-iced only). Each unit is thermostatically controlled (except the Model B–9) to turn on when the "water temperature approaches freezing" and will "turn off according to the internal thermostat shut-off temperature".
6. **The Model W–449 is a Bucket Water Heater.** It is designed to "heat" a five gallon bucket to 110ºF within twenty minutes. Once the water temperature of approximately 110ºF has been reached—the unit will only re-activate when the water temperature cools down to approximately 80ºF. Do not leave unattended.
7. Low Voltage is a possible cause for failure or poor performance. Measure voltage at receptacle with unit energized. Voltage drop means wattage reduction. **Extension cords are what cause voltage drop and are unsafe to use.**



PROPER MEANS OF INSTALLATION

Caution: To provide continued protection against electrical shock:

1. **Have a qualified electrician properly install a ground fault circuit interruptor (GFCI) outlet, acceptable for outdoor use and protected from the rain and snow immediately adjacent to the location where the unit will be used.**
2. Route supply cord through 1½" or 2" piping or conduit for safety while locating the unit so as to be protected from damage and/or chewing by livestock.
3. **DO NOT USE EXTENSION CORDS!**
4. Inspect the cord for damage before using.
5. Do not plug unit in until the tank or pond is filled with water and the unit is positioned in the tank. Do not operate the unit out of water. This will void the warranty.
6. For Metal Tanks—Drive ground rod near tank. Securely clamp the uninsulated Copper wire to ground rod and securely clamp the other end of copper wire to the tank.
7. For Plastic Tanks—Drive ground rod near tank. Securely clamp uninsulated Copper wire to ground rod and drape the other end of uninsulated Copper wire into the water inside the plastic tank. Drive rod a minimum of five (5) feet in the ground.
8. For Plastic Ponds—Drive ground rod near the pond. Securely clamp uninsulated Copper wire to ground rod and drape the other end of uninsulated Copper wire into the water inside the plastic pond. Drive rod a minimum of five (5) feet in the ground.
9. Unplug the unit at the receptacle when not in use or before removal from tank. Store unit indoors after winter use following a thorough cleaning of unit.

Safety is primary when installing our units. Electricity and water are a dangerous combination—follow our instructions precisely when installing a unit.

MAINTENANCE

- If the unit freezes in due to power loss, allow the unit adequate time to melt itself free. Do not chip or cut at the unit while plugged into the receptacle.
- Do not allow lime deposits or other impurities to build up on the heating element. This can cause "hot spots" which is the primary reason for failure and voids the warranty. Remove the impurities by using vinegar or LimeAway on the Heating Element (Tubular or Cast Aluminum Element).
- When taking the unit out of service, disconnect the power supply cord, remove the unit from the water, clean the element (see above) and store indoors.

DO NOT ATTEMPT TO DISASSEMBLE THE UNIT AS THE UNIT HAS NO SERVICEABLE PARTS. THIS WILL VOID THE WARRANTY.

CHECK FOR PROPER OPERATION (Air Test)

1. Set unit in freezer for one hour or outside if the temperature is below 35ºF for one hour <u>out of water.</u> Note: This is an air test—**<u>do not test the unit in water</u>**.
2. After an hour, plug the unit into a properly installed GFCI **"only"**. Hold the unit by the supply cord. Within seconds, the element should begin to heat. Listen for the thermo stat to "click off". Unplug and cool down the unit. The unit is working properly.

MAXIMUM EFFICIENCY IN HARSH ENVIRONMENTS

1. Protect the de-icer from high winds.
2. Install a partial cover and place the Submergible units up on a concrete block.
3. In larger tanks: Select one side to maintain open water. Wedge a loose partition about 8" high separating the ice free area.
4. Wind Breaks: 1" Styrofoam insulation, partial covering and banking up on the tank sides make heating easier in severe weather.

DE-ICER WATTAGE/GALLON REQUIREMENTS

	5 GAL	25 GAL	50 GAL	100 GAL	200 GAL	300 GAL
30º	250W	250W	500W	1000W*	1000W*	1000W*
20º	250W	250W	500W	1000W*	1000W*	1500W*
10º	250W	250W	500W	1000W*	1500W*	1500W*
0º	250W	500W	1000W	1500W*	1500W*	1500W
-10º	250W	500W	1000W	1500W*	1500W*	1500W
-20º	N/A	1000W	1500W	1500W*	N/A	N/A

* Denotes 1250 Watts Cast Aluminum Floater can be used.

THE FOREGOING WARRANTY DOES NOT APPLY IF:

1. The power cord or unit shows evidence of livestock damage or consumer negligence.
2. The ground terminal on the electrical plug has been removed or another plug has been used in place of the original plug.
3. Allowing lime or other water impurities to build up on the heating element causing possible "hot spots" which is a primary reason for the heating element to fail. Periodically, you should clean the heating element with vinegar or LimeAway.
4. The unit has been allowed to operate out of water except when performing Air Test away from water.
5. Failure to properly install the unit according to the described "Proper Means of Installation".

LIMITED WARRANTY

The Models H–4810, H–4815, H–439, H–429, H–4615, DPH–15, UPH–15, H–493, BD & GBD–Series C–250, C–500, P–500 and W–449 are guaranteed for one year and the Models H–418, H-418C, H–409, H–419, H–49, P–418, C–50 are guaranteed for three years after the original date of consumer purchase or date stamped on the unit against defects due to materials and the company's workmanship only. The sole obligation shall be to replace the defective unit with a replacement unit. Units should be "Checked for proper operation" prior to returning as defective. Units must be returned prepaid. No liability for loss or damage of any nature or kind, whether arising out of or from the use of the product, whether or not defective, is assumed by Farm Innovators, Incorporated and/or their employees. **"Warning: for your protection always unplug the unit from its power source before installing or servicing. Should the unit appear to not be working do not reach, remove or disassemble unit before you disconnect power.**

Return Address: Farm Innovators, Inc. 2255 Walter Glaub Drive, Plymouth, IN 46563