



ALLIED PRECISION INDUSTRIES, INC.  
705 E. North Street  
Elburn, IL 60119

## Instructions for Floating De-icers Models 7521, 7621, 521G, and 621G Setup and Operation

### Specifications

Models 7521 & 521G: 1500 watts, 120 VAC, 60 Hz

Models 7621 & 621G: 1000 watts, 120 VAC, 60 Hz

### CAUTION

1. Have a qualified electrician install a properly grounded receptacle outlet, acceptable for outdoor use and protected from snow and rain, immediately adjacent to the location where the heater will be used.
2. Route the supply cord and locate the heater so as to be protected from damage.
3. Inspect the cord before using.
4. Do not use extension cords. Approved for use only with the API LOCKNDRY detachable power supply cord.
5. Unplug the heater at receptacle outlet when not in use or before removing from tank or pond.
6. Store heater indoors after winter season.
7. Connect to properly grounded outlets only.
8. **Connect only to a circuit that is protected by a Ground Fault Circuit Interrupter (GFCI).** This is a sensitive device that cuts off the electricity if there is any leakage of current. This device may be obtained from any electrician or hardware store.

### Installation

1. **If the unit is to be used in a non-metallic tank, a Model 88R guard must be attached** in order to prevent the heating element from coming in contact with the walls of the tank. Models 521G and 621G include the 88R guard. For Models 7521 and 7621, the guard must be purchased separately.
2. The unit should be placed in a tank with water and then **plugged into a Ground Fault Circuit Interrupter.**
3. Some animals--particularly horses--may try to remove the deicer from the tank. To counteract this, you may wish to run the cord through PVC or galvanized tubing extending over the tank or use the API Deicer Safety Tether Model 23ST. Be sure to allow slack in the cord to compensate for varying water level.
4. The unit is thermostatically controlled so that it will not turn on until the temperature drops to around 40°F. If it is removed from the tank, it will turn on and then shut itself off in about 60 seconds and will then cycle on and off.

### IMPORTANT

*The use of the Model 88R guard is mandatory to prevent the heating element from coming into contact with combustible materials such as the side or bottom of a non-metallic tank. See the back of this sheet for instructions on attaching the guard. Read and follow all instructions.*

### Maintenance

Do not allow lime or other impurities in the water to build up on the heating element. The frequency of cleaning depends directly upon the composition of your water supply. To remove buildup, soak the heating element in vinegar or a lime removing cleaners obtained at any farm or hardware store. Then use a rough brush to scrub the element. Do not use steel wool or something that will scratch the element. Inspect the element for any cracks before reinstalling.

### Troubleshooting

The de-icer has been fully tested and is guaranteed to perform to specifications; there are no user adjustments or modifications on the unit. However, you can perform certain checks for the following conditions.

- *The tank or pond freezes over:*

Unplug the unit and plug in an electrical device such as a lamp or power tool. If no power is present, check that a breaker has not been tripped or a fuse blown. If the breaker or fuse is ok, check the wiring to the outlet, otherwise remove the unit from the tank or pond before resetting the breaker or replacing the fuse, and test the unit with a Ground Fault Circuit Interrupter (GFCI) as described below.

If the de-icer is located far from the electrical breaker box, there could be a significant voltage drop in the wiring to the outlet which could reduce the power output of the de-icer. You should consult a qualified electrician if you suspect this is a problem.

If the air temperature has dropped quickly, some ice may form before the unit senses the change in temperature. If, however, the ice has not started to melt within 2 hours, you should return the unit to the place of purchase.

- *The livestock are being shocked:*

If you suspect that the animals are being shocked when they contact the water, **DO NOT TOUCH THE WATER.** Instead, unplug the unit and remove it from the tank for testing.

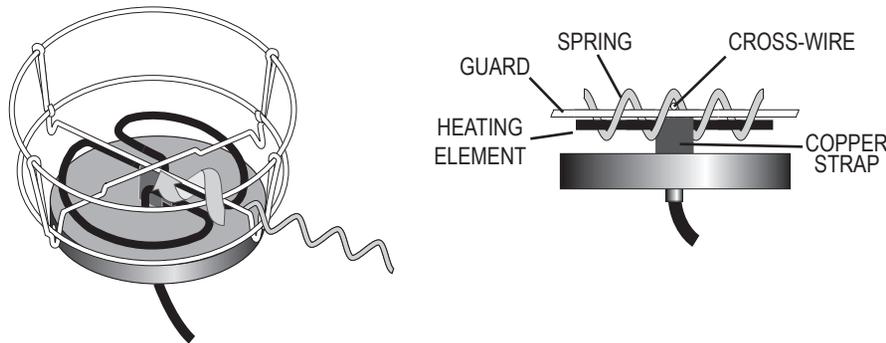
- *To test the unit:*

Place the de-icer in a freezer for 20 minutes to make sure that the thermostat is turned on. Locate a GFCI outlet (typically found in a bathroom in newer homes) and run some water into a bucket, sink, or bathtub near the outlet. Quickly remove the unit from the freezer, place it into the water, and plug the unit into the GFCI while taking care not to touch the water. If the unit trips the GFCI, it is defective and should be returned to the place of purchase. If it does not trip the GFCI, it is operating properly and is not leaking electricity to the water. However, there could be electricity entering the tank via the ground wire due to presence of voltage on the ground circuit in the electrical supply from the building. Many times, this voltage is coming directly from the electric utility company. For help with this problem, contact Allied Precision at (800) 627-6179 or (630) 365-0340.

**The Model 88R guard comes standard with Models 521G and 621G de-icers. It should be purchased separately for use with Models 7521 and 7621. The guard MUST be used when operating the de-icer in a non-metallic tank.**

### Attaching the Guard to the De-icer

Turn the unit upside down and place the guard as shown. Rotate the short spring to thread it onto the guard and the straight section of the heating element. The spring should capture the cross-wire on the guard and be centered around the copper strap as shown.



### Warranty

This de-icer is warranted for a period of 12 months from the date of purchase. If you believe your de-icer is defective and still within the warranty period, return it to the factory or place of purchase for inspection and possible replacement. The warranty is voided if (1) the ground terminal on the plug has been removed, (2) excessive deposits have been allowed to accumulate on the heating element, or (3) there is evidence of general abuse such as animals chewing on the cord. This warranty does not cover incidental or consequential damage resulting from either a defect in parts, materials, or operation failure. Some states do not allow the exclusion or limitation of the above damages so the above limitation may not apply to you. No agent, employee, or representative of Allied Precision has any authority to bind Allied Precision to any affirmation, representation or warranty directed towards any products bearing the Allied Precision name, except as stated herein. This warranty gives you specific legal rights--you may also have other rights which vary from state to state.

### LOCKNDRY Features

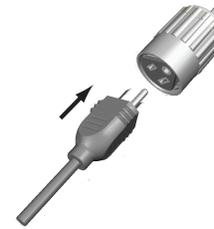
The LOCKNDRY detachable power supply cord provides a secure, water-resistant connection that is UL approved for use with stock tank deicers whereas conventional extension cords are not. The LOCKNDRY cord set features:

- Plugs into any normal 3-prong outlet
- Mates with LOCKNDRY plugs to form a water-resistant seal
- Keeps connection from separating during use
- Second, locking nut for secure connections
- Outdoor approved cord set
- UL listed

## Instructions for attaching the LOCKNDRY™ Detachable Power Supply Cord (Available Separately)

### INSTRUCTIONS

- (1) Insert the plug into the receptacle just as you normally would, making sure that the plug is fully inserted.



- (2) Slide the large nut forward to engage the threads on the plug.



- (3) Rotate the large nut to tighten the plug against the receptacle. HAND TIGHTEN ONLY.



- (4) Slide the thinner red nut forward to engage the threads.



- (5) Rotate the red nut until it is snug against the larger nut. HAND TIGHTEN ONLY.



### CAUTION – To provide continued protection against shock:

- a) Connect the heater appliance and API LOCKNDRY per these instructions and those provided with the API LOCKNDRY cord set.
- b) Connect only to a properly grounded GFCI protected receptacle outlet.
- c) Use no more than one LOCKNDRY cord set – for an installation. Do not use an extension cord if the receptacle is located such that the heater and/or LOCKNDRY cord set cannot be plugged in. Have a qualified electrician install a properly grounded GFCI protected receptacle outlet, acceptable for outdoor use and protected from snow and rain where the heater will be used.
- d) Use only the LOCKNDRY cord set referenced in the instructions.
- e) Locate the heater and route its supply cord and LOCKNDRY cord set so as to be protected from damage.
- f) Keep the LOCKNDRY and heater supply cord set connection a minimum of 6 inches above ground to avoid wetting by pooling water or accumulated snow.
- g) Inspect heater supply cord and LOCKNDRY cord set before using. Do not use if the supply cord and/or LOCKNDRY cord set is damaged.
- h) Do not unplug heater from the LOCKNDRY cord set. Unplug the LOCKNDRY cord set only at receptacle outlet when not in use or before moving location of heater.
- i) Store the LOCKNDRY cord set and heating appliance indoors after the winter season.