

Installation Instructions For Model 2002DP Universal Drain Plug De-Icer

Setup and Operation



ALLIED PRECISION INDUSTRIES, INC.

IMPORTANT: To insure safety for both you and your livestock it is essential that you read and follow the entire instructions.

Installation

1. Unscrew and remove the drain plug from the drain hole of your stock tank. Save this plug because you will need to reinsert the drain plug once the heating season is over and you have removed your de-icer from the tank.
2. Remove the plastic nut from the de-icer.

3a. For use in a Rubbermaid® tank

We recommend that you remove the entire drain assembly. To remove this assembly you must first remove the plastic nut found on the outside of your Rubbermaid tank. This nut holds the drain assembly in place.

After the nut is removed, the drain assembly can be removed. You should remove the threaded drain assembly, plastic nut, and rubber gasket. Save these items to be reinstalled in your tank after the heating season.

If you are using a Rubbermaid tank and have removed the drain assembly as described above, you should choose side "B" of the nut as shown in Figure 1. You will install your deicer with this side facing the tank.

3b. For all other tanks

You will note that the nut has two sides. One side is marked "A" and the other is marked side "B." You must determine which side of the nut to place against the drain hole.

- i. Determine the correct side by placing the nut against the drain hole on the outside of the tank. Try to fit the diameter of the raised inner ring of each side of the nut into the inner diameter of the drain hole (see Figure 1). Choose the side that fits most snugly. This

will help secure and center the de-icer within the opening of larger drain holes found on some tanks.

- ii. If the raised inner ring (on both sides of the nut) shown in Figure 1 is larger in diameter than the drain hole diameter found on your tank, then you may use either side of this nut. This indicates that the drain hole is small enough to allow your de-icer to remain centered within the drain opening.
- iii. If the nut is "bumping" into the ground or any other surface which the tank rests on, you must shim under the tank to raise this area. The nut should then twist freely.

4. Be sure to leave the rubber gasket on the threaded side of the de-icer and against the plastic plate of the heater housing.
5. Set the de-icer on the inside of the tank. Let it rest on the bottom of the tank. The rubber gasket should be

between the inside of the tank surface and the plastic plate of the heater housing (see Figure 2 and Figure 3).

6. Insert the power cord plug through the drain hole from the inside of the tank. If the fit is tight, "wiggle" the plug from side to side until the plug passes through the drain hole.

- 7a. Test to be sure that the plastic plate and rubber gasket both fit flush against the diameter of the drain hole from the

inside of the tank. If not, proceed to the next step.

- 7b. If the bottom of the plastic plate is bumping into the bottom of the tank surface and preventing the de-icer from laying flush against the drain hole-snap the plastic strip off along the groove as shown in Figure 4. If breaking this strip was necessary, then you must also take a knife and cut the overlapping piece of gasket.

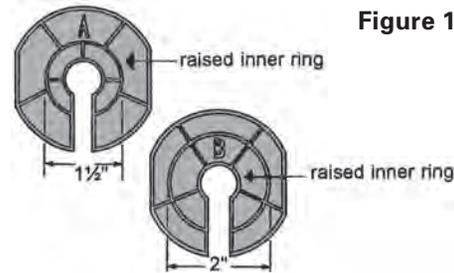


Figure 1

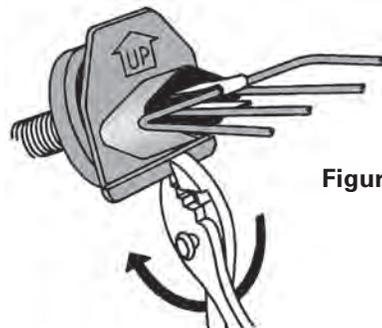


Figure 4

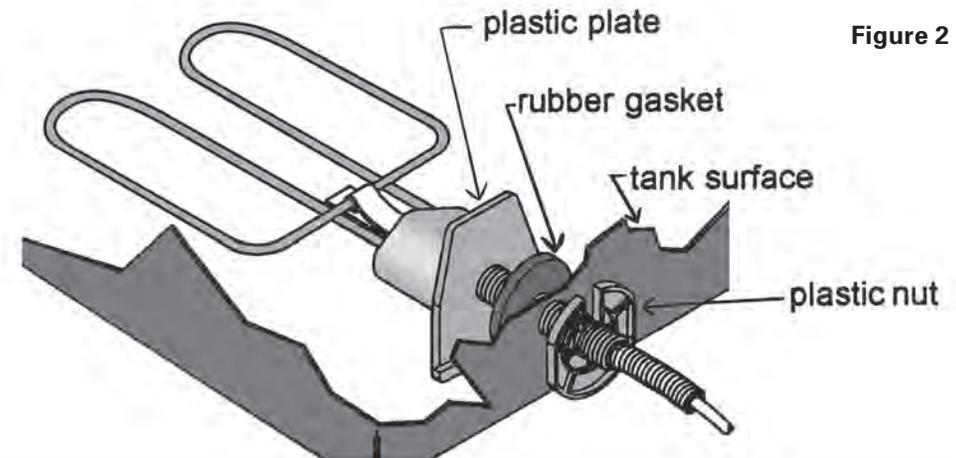


Figure 2

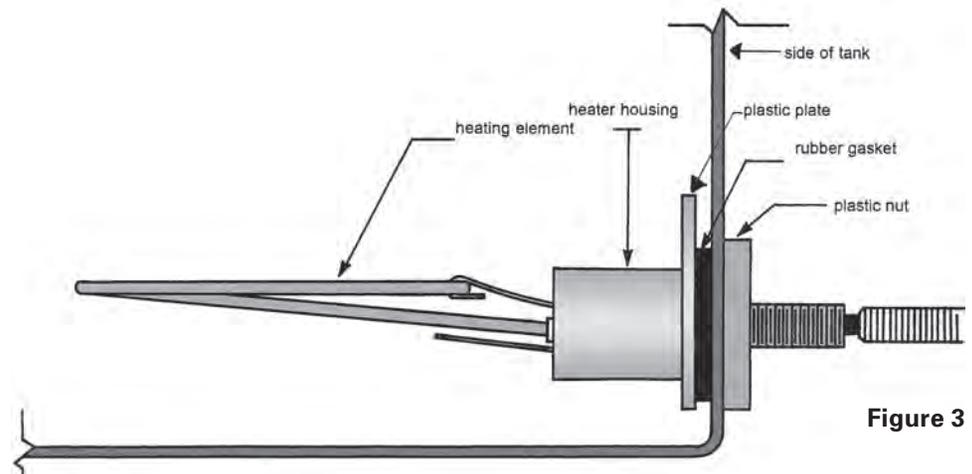


Figure 3

8. Insert the plastic nut onto the cord using the “slot” in the nut. The plastic nut should be inserted so the side chosen in step 3 is facing toward the tank surface. If you have not completed step 3, you must do so before attempting this step.
9. Tighten the nut onto the threaded stem of the heater housing and up against the outside tank surface. Position the nut so that the raised ring fully inserts into the drain hole of the tank (see Figure 2 and 3). This is only necessary if you have determined that this ring is of smaller diameter than the drain opening in your tank as tested by completing step 3. This will stabilize the de-icer.
10. Tighten this nut “snug” but do not over tighten. Be sure the unit is unable to twist in the tank.

If You Are Experiencing Leaks

1. Check to be sure the unit is fitting flush against the diameter of the drain plug on the inside of the tank. See step 8.
2. Did you choose the correct side of the nut? See step 3.

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 cleaner 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 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 before resetting the breaker or replacing the fuse, and test the unit with a Ground Fault Circuit Interrupter (GFCI).

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 two 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.

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.

Specifications

Model 2002DP
1500 watts, 120 VAC, 60 Hz

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.