

The Cozy Hen[®] Waterer

Freeze-Resistant

Operator's Manual

Introduction

Your Cozy Hen[®] Waterer provides fresh water to your chickens via a watering nipple that is widely used in the poultry industry. This patented* waterer features thermal management, advanced insulation technology, and a 'hot nipple' that resists freezing for outdoor temperatures below 0 °F (-18 °C).

* U.S. Patent 10,349,599



Important: Use your Cozy Hen[®] Waterer according to these instructions.

How it works

The patented 'Hot Nipple' couples the reservoir heat of the water in the inner bucket to the nipple via a heat pipe in an insulated housing. After filling the inner bucket with 100 °F (37.7 °C) warm water, the waterer can supply liquid water for 8 hours or more when the ambient temperature is as low as 0 °F (-18 °C), so long as the waterer is shielded from direct wind so the effective wind chill is greater than -10 °F (-23 °C). With the use of an optional† 15 W submersible heater, the waterer supplies water at 60-70 °F ambient temperature is as low as 0 °F (-18 °C). When wind shielded, the waterer provides liquid water to your birds at air temperatures that are well below 0 °F.

† **NOTICE:** There are currently no available heaters suited for use with this waterer. Third-party heaters are not suitable because they apparently have poor quality control, or lack testing of current designs in extreme cold temperatures, or they lack overheating protection, which can lead to potentially dangerous situations. Accordingly, Neora Inventors, LLC is developing an overheat protected, extreme-low-temperature tested, low voltage heater system for use with the Cozy Hen[®] Waterer. This heater system soon will be available for 'beta-testing'.

General Operation

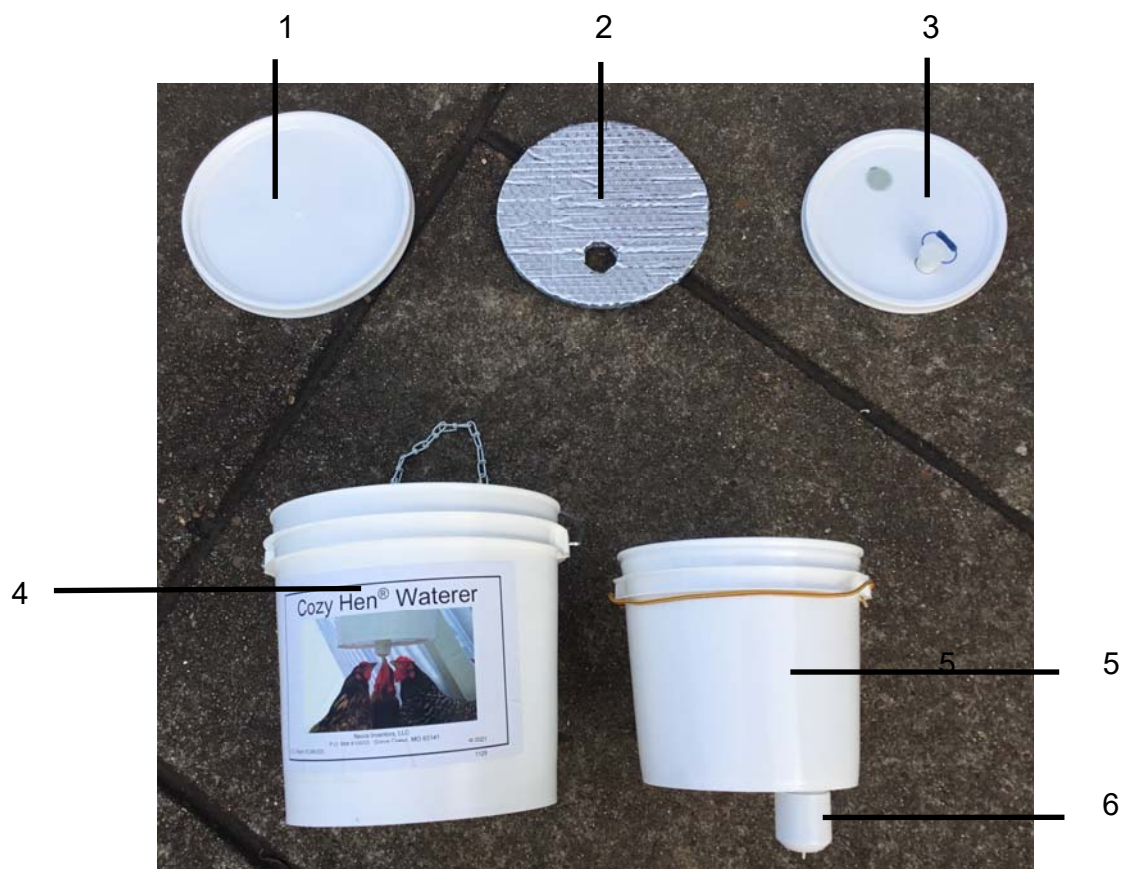
Read, understand, and follow all instructions in the manual before use.

- **Do not fill the inner reservoir bucket with water that is too hot.** Water temperature greater than about 105 °F (40.6 °C) in the bucket and greater than 100 °F (37.7 °C) at the drinking end of the nipple may injure the birds. Use of a quick read 'kitchen' (pocket) thermometer is recommended.
- **Wash the inner reservoir bucket prior to use.** Regularly inspect the waterer for soil, mildew, or contamination. Regularly wash the inner reservoir bucket and other components exhibiting soil. Do not leave water in the waterer for more than 4 days without changing the water. If any soiling, mildew, or contamination is seen, wash the inner reservoir bucket and any soiled parts with warm water and detergent and rinse before refilling. If a bio-film is found or suspected, use a hydrogen-peroxide-based or chlorine-based disinfectant.

- **Do not overfill the inner reservoir bucket.** Its capacity is one (1) gallon.
- **Securely mount the waterer.**
- **Keep small children from falling into the waterer or from getting under the waterer.** Note that when filled with 3.5 liters of water, the waterer weighs more than 8 pounds (3.6 kg). Persons who cannot safely lift 10 pounds should not lift the filled waterer.
- **Do not use the waterer or its components for other than their intended use.**

Product Overview

Important: The Cozy Hen[®] waterer is fully assembled and is easy to set-up. Remove the waterer from the shipping box and remove the packing material.



1. Outer bucket lid
2. Top insulation
3. Inner bucket lid

4. Outer bucket
5. Inner bucket
6. Hot nipple

The Cozy Hen® Waterer’s submersible heater manufactured by Neora Inventors, LLC will soon be available for ‘beta-testing’.

If you use a Cozy Hen® Waterer’s submersible heater:

Use the submersible heater according to these directions, see the Safety Information for the Submersible Heater shown below.

Do not use a heater if ambient temperatures are well above freezing (32 °F, i.e., 0 °C).

Use the submersed heater in at least of 1/2 quart (about 1/2 liter) of water in the inner reservoir bucket.

Safety Information for the Cozy Hen® Waterer’s Submersible Heater

 WARNING
Electrical and fire hazard. Failure to read and follow the instructions below may result in fire, serious injury or death.

- The heater system comprises the following components:
 - Heater with low voltage power cord and connector
 - Low voltage 3-conductor wire with a connector at each end
 - Power supply (IP67 rated, 12 VDC, 15 W, or 30 W if used with optional coop lighting accessory) with connected control box with 120 VAC power cord and plug.
- The heater should only be connected to the 12 VDC power supply via the 3-conductor wire.
- Submersion of the low voltage wire connectors, the power supply, control box, and power cord plug must be avoided.
- The power supply control box power cord should only be plugged into a receptacle that has a GFCI (Ground Fault Current Interrupter) in the branch circuit that supplies the power. A GFCI is required for all electrical receptacles used outdoors or near water or wet conditions.

You should regularly check that the GFCI is in good working order by using the test and reset buttons according to instructions on the GFCI.

The GFCI can provide protection in the event of a ground fault (for example, a “short circuit”). Such a fault may result from insulation failure and has the potential to cause electrical shock or electrocution.

If you don’t have a GFCI, a GFCI can be installed by a qualified electrician. A portable GFCI unit may be used if it is rated for the conditions (e.g., outdoor, weather-exposed) in which you will be using it.

- Before each use, verify that the AC plug and receptacle (electrical outlet) are dry and clean and free of water, contamination, and corrosion deposits. The AC cord should be plugged into an elevated receptacle that is above the height of any standing water, and use a “drip loop” where the cord is plugged into a receptacle so that a portion of the cord hangs below the receptacle. This reduces the likelihood of water running down the cord and reaching the plug or receptacle, which always must be kept dry. Further, if the outlet is outdoor, it must have a rain/weather shield or otherwise protected from precipitation and water spray.
- Before each use and frequently during use, inspect the system components (heater and low voltage cord, connectors, power supply and control box, and AC cord and plug) for any signs of damage. The electrical insulation of the power cord may crack or become damaged in extreme cold such as temperatures below 0°F (-18C), or from rough handling, repeated flexure, or aging. Under no circumstances should you use this heater where the ambient temperature is lower than -28°C (-18°F).

- If any damage is found, unplug the heater with dry hands, and do not use the heater. Discard the damaged heater. Never unplug the system by pulling on the AC cord. And never pull on the low voltage cord to detach the heater from the water container.
- Never use the heater unless it is submerged. Although the heater is overheat protected, in the event of a component failure, for example, as a result of electrical power surge, nearby lightning strike, or mis-handling, the heater can become hot and may cause burn injury.
- Do not place a hot heater into cold water as it may damage the heater possibly causing electrical shock.
- Do not use a heater that has been frozen in ice.



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Use the suction cups to stick the heater to the bottom of the inner bucket on the inside.

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Quick Setup

1. Wash and rinse the inner bucket (inside and out) before first use.
2. Check that the 'Hot Nipple' assembly is fully inserted into the inner bucket (Figure 1).
 - The aluminum tube should pass through the rubber grommet into the inner bucket.
 - The plastic housing of the hot nipple should contact the grommet in the bottom of the bucket.



Figure 1

3. If an optional submersible heater is used:

1. Wash it prior to first use.
2. Then place the heater in the bottom of the inner bucket (Figure 2).
3. On the inner bucket, find the 1 inch diameter hole in the lid and feed the low voltage cord and connector through the notch. Put the hole-plug cap in place (Figure 3).



Figure 2: Optional heater in the bottom of the inner bucket

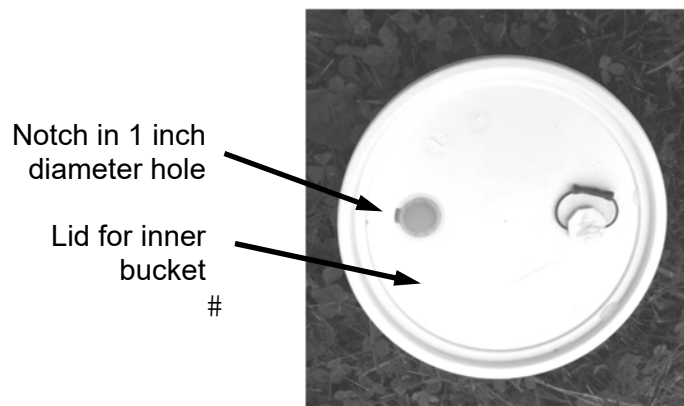


Figure 3#

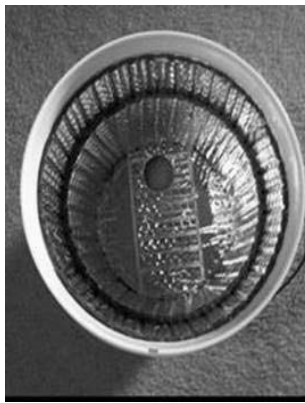
4. Fill the inner bucket with about one gal./3.8 liters of warm water. Replace the lid on the inner bucket.
Note: The temperature of the water must be 100 – 105 °F (38-40.6 °C, just a bit warmer than human body temperature). This will supply liquid water to the hot nipple for 8 hours or more when the outside temperature is 0 °F and the wind is less than about 8 mph.

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- Place the inner bucket (1 gallon) into the outer bucket (2 gallon) so that the 'cord handle on top of the inner bucket lid, so that you can see the hot nipple' protrudes **vertically** through the hole in the bottom of the outer bucket (Figure 5). **Note:** Arrange the inner bucket lace cord handle on top of the inner bucket lid so you can easily remove the inner bucket (Figure 6).



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Figure 4: View looking down into outer bucket.



Figure 5

Nest the inner bucket within the outer bucket so that the hot nipple is vertical.



Figure 6

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Important: Set the waterer on the stand when filling or assembling so you don't have to put it on the ground. (see Figures 6 & 7) Keep the nipple clean.



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Figure 7

- Put the top insulation on the lid of the inner bucket (Figure 7).

- If you are using an optional heater:** Feed the low voltage cord and connector through the notches in the insulation and the outer bucket. Then, line up the notch in the lid with the cord before putting the lid on the outer bucket (Figure 8).



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Figure 8

8. The fully assembled waterer can be hung by the chain that is provided (Figure 9). The height of the waterer should be selected so that the actuating pin of the nipple is at the proper height off the ground. The proper height depends on the age and size of your birds. [For more information, see the technical article “How to Mount the Cozy Hen® Waterer and Select the Height” on our web site, <http://www.cozyhen.com>]

For **adult chickens**, the actuating pin at the drinking end of the nipple should be about 12 to 20 inches above the ground so that the birds must tilt their heads upward at about a 45 to 55 degree angle and stretch their necks a little. For larger breeds, the waterer might even have to be a few inches higher.

For **chicks & pullets**, the waterer must hang much closer to the ground. For young chicks (first week), the waterer should be situated so that the actuating pin at the drinking end of the nipple is at about eye level or a bit above, perhaps 4 to 6 inches off the ground. The height of the waterer should be raised every 2-3 days in the first week. Typically, in the first month, the waterer should be raised about twice a week so that by the end of the month, the actuating pin is at about 12 inches or so off the ground. After the first month, the waterer should be periodically raised as needed to accommodate the head tilt and neck stretching for proper drinking posture.

9. The nipples are ‘no-drip’ type nipples, and a drip-pan is generally not needed. However, occasionally, a modest amount of water drip may occur. If this happens, a drip pan or absorbent material placed below the nipple, or drainage may be necessary.

If your flock has different size birds, a block of wood or some bricks may be placed under the waterer so that the shorter birds can reach the actuating pin at the drinking end of the nipple. If you set the waterer at a lower height than optimum for the tallest birds so that it accommodates the smaller birds,



be sure to check for wet litter, and take measures (e.g., a drip pan or absorbent material) to avoid potential health issues from wet litter.

Important: The waterer is intended for mounting by placement on a support shelf (e.g., a plant stand) or by hanging from a hook, nail, or shepherd’s crook. These supports are commonly available from garden shops and home improvement stores. The preferred method is by hanging as this allows for easy height adjustment by the use of an extension chain with S-hooks (available from our web site www.cozyhen.com), also available there is a double snap clasp that can be useful for height adjustment.

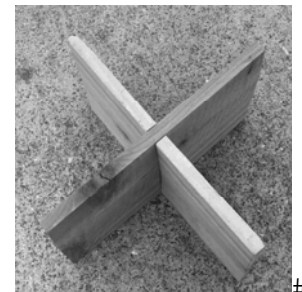
It is important that the nipple is vertical or nearly so. If the waterer is mounted so the nipple is tilted, dripping may occur. Also, the bucket lids do not make a water-tight seal, so water may leak out of tilted waterers.

Important Features

- **Clean water** The use of a watering nipple avoids the fouling that is common with watering dishes and troughs. One nipple can easily water up to 8 chickens.
- **Perfect for use in sub-freezing temperatures, low energy cost** The waterer can provide liquid water with ambient temperature at or below 0 °F (-10 °C). Obtain the best performance in sub-freezing temperatures by filling the empty inner reservoir bucket with about 3.8 liters (or 4 quarts) of warm (100-105 °F) water. The energy cost without the submersible heater is the cost of warm tap water. The advanced thermal management design means a low energy cost. With a nominally 15 Watt heater, the energy cost is about 4.3 cents/day, which is 10-30% of the power used by most other heated waterers. Compared to other heated waterers, typical electricity cost savings are \$3 - \$7 per month during the cold weather months.
- **Provides cool water in hot weather** Filling the inner bucket with 2 quarts of water and 2 quarts of crushed ice will provide cool water to your birds for several hours.
- **Easy to fill, washable inner bucket** The lids of the plastic buckets have been modified for easy removal, and the fill-hole plug has a lift loop – especially helpful features when wearing gloves in cold weather. The inner bucket lid features a fill hole and an air vent/access hole for the power cord of an optional submersible heater. The inner bucket can be filled without removing the snap-on lid of the inner bucket by using a funnel. Do not overfill. The inner bucket capacity is 1 gallon.

Note: The bottom ¾ liter (about a ¾ quart) in the inner bucket is not accessible for watering the chickens or ducks. If each bird needs about 200-300 ml (0.2-0.3 liters or 0.21-0.32 quarts) of water per day, then for N birds, the fill should be N times 0.25 liters (or ¼ quart) plus ¾ liter (or ¾ quart). For example, for 4 birds, the minimum fill should be $4 \times 1/4 + 3/4 = 1\frac{3}{4}$ liters or almost 2 quarts.

The inner bucket can be easily removed for washing or filling. Washing with warm water and dish washing detergent will keep the bucket clean and fresh.



- **Durable cedar wood stand** The Cozy Hen® Waterer comes with a cedar wood stand so you don't have to set the waterer on the ground when filling. It is best to avoid getting soil in the orifice of the watering nipple!
- **Easy-to-clean nipple assembly** The hot nipple can be removed from the inner bucket by pulling it out of the rubber grommet. The PVC shield can be removed from the nipple assembly by loosening the nylon screw. After washing and flushing, dry the parts and reassemble the nipple assembly and re-install it through the grommet.
- **Poultry safe materials and durable construction** The durable construction uses FDA food grade high density polyethylene pails, water supply PVC, aluminum, an FDA food grade silicone grommet, polyethylene insulation, and aluminized polyester radiant heat shield. These comprise safe and easy to clean materials.