



Installation Manual

www.airgenerate.com


AirTap™ Product Description

Overview

The AirTap™ water heater uses heat pump technology to convert energy extracted from air to heat water. This simple-to-use and virtually maintenance-free water heater saves energy consumption by about 70% and reduces monthly energy bills.

The AirTap™ unit plugs directly into an existing gas or electric water heater, and utilizes its own supply of electricity as the energy source to operate the low-wattage compressor that harvests the air energy.

Technical Specifications

Specifications: (Ambient Temp. 68°F)	
Max water temp:	130°F (10° F between open and close)
Efficiency	240%
Energy Factor	2.11 
First Hour Rating	43 Gallons
Output	7000 BTUs
Dimensions	18" x 14" x 14" (height)
Weight	48 lbs

Electrical Specifications	
Volts	115
Amps	12 initial surge/6 operating
Phase	1
Frequency	60 Hz

System Requirements

The AirTap™ can only be placed indoors. If using the unit in an attic, garage or basement, the unit can be installed without any additional equipment. However, if using the device in a space with less than 1,000 cubic feet, an external vent will likely be necessary as well as ductwork to direct the cool air expelled from the unit. A duct kit can be purchased from AirGenerate™.

CAUTION: If the AirTap™ shares space with a fireplace or gas appliance, it must be vented to draw air from the outside to prevent back-drafting, a serious fire hazard.

The AirTap™ connects to a typical household outlet, 115V, 15A. While the device requires about 12A initially upon power up, the device draws 7A on average during operation. It is recommended that a dedicated 15A circuit be used to power the AirTap™. It is important to reserve the outlet solely for the AirTap unit, as shortage may occur.

The AirTap™ is recommended for tanks between 30 and 80 gallons. The system is easiest to install in tanks which are at least 35 inches tall.

A drain must be available to accommodate condensate generated by the AirTap™. In high humidity environments this condensation can amount to as much as 1 quart per day. The condensate can be routed to the outside or expelled into a plumbing vent pipe, by way of a drainhose included with the AirTap™.

Warnings

When installing the AirTap™ on a gas or electric water heater, disconnect permanently the gas or power supply to the water heater while the AirTap™ is being installed. The original gas/power supply to the gas/electric water heater shall remain disconnected after installation.

When installing the AirTap™ on a gas or electric water heater, please do not use the water heater while the AirTap™ is being installed.

Before installing the AirTap™ on the existing water heater, make sure that the water heater is on a flat surface and properly secured.

Installation Guide

The installation process normally takes between 1 and 2 hours. The installation can be completed by one person but 2 people working together can simplify the installation process. It is recommended to have a plumber or any technical person having done some plumbing work to install the unit. In some places, building department permits may be necessary for the installation. Since the water in the water tank is in high pressure and high temperature, use your own judgments in installing the unit yourself. AirGenerate™ recommends use of only licensed plumbers to install AirTap™. In addition to this guide, please follow all safety measures provided by your water heater company.

Safety Information (Please read this section carefully to prevent accidents or injuries).

The following precautions are recommended to prevent electrical shocks:

- Disconnect power before installing the AirTap™.
- Ensure that the power receptacle is rated for 115V and at least 15A. Make sure no other appliance is sharing this outlet.
- Ensure that the electrical supply has proper overload fuse or breaker protection.
- Ensure that wire sizes and connections comply with all applicable codes.

The following precautions are recommended to prevent chemical accidents:

- Wear eye protection during the installation. If the copper tubing is ruptured, the refrigerant used in the AirTap™ may cause burns.
- When the AirTap™ is running, do not bend the copper tubing because the refrigerant may leak and cause severe burns.
- In case of leaks, do not breathe the refrigerant. Ventilate the area and vacate for at least one hour.

The following precaution is recommended to prevent injuries:

- The AirTap™ system weighs 48 lbs. All lifting should be done with caution and assistance if available to prevent back injuries.
- For people who suffer from back problems, a second person should assist.

The following precaution is recommended to prevent accidents:

- If the pressure relief valve on the existing water heater tank is leaking or dripping, call a licensed plumber for repair. Do not plug or remove valve. Failure to follow this instruction could result in an explosion.

The following precautions are recommended to prevent other possible accidents:

- Water temperature over 125°F can cause severe burns instantly resulting in severe injury or death.
- Follow all safety instructions provided by the manufacturer of the existing water heater.

Tools required for the installation:

- Adjustable 14" pipe wrench
- 12" Adjustable wrench
- 6" Adjustable wrench
- Phillips screwdriver
- Safety gloves
- Safety glasses
- A Level

Inside the AirTap™ package, you will find:

- The AirTap™ water heater unit
- Thermal insulation for heating coil
- Drain hose
- 2 mounting brackets
- 3/4" nipple tube
- 3/4" Flange adaptor
- 3/4" T adaptor
- Teflon Tape

Step-by-Step Instructions



Remove and unwrap the AirTap™ and all parts from the box. It helps to keep all the parts within reach and in sight throughout the process.

Make sure that the AirTap™ unit works correctly before installing it.

- A Plug the unit into a typical household 115V plug and let it run for 4 to 5 minutes. Touch the heating copper tube in the back and feel the heating taking place.
- B Unplug the AirTap™. If the copper tube was hot to the touch and you heard the quiet humming of the fan, the AirTap™ unit is functioning normally.

MAKE SURE NOT TO RUN THE AIRTAP™ UNINSTALLED FOR MORE THAN 7 MINS.



Now you are ready to prepare the water heater for installation.

- 1. Turn off the electricity to the water heater. Use a tester or voltmeter to ensure that the circuit to the water heater is powered down. In case of a gas/propane water heater, turn off the gas/propane valve.



- 2. Turn off the cold water inlet to the water tank and open the hot water tap to remove some water to depressurize the water tank.



- 3. Make sure that the unit has access to a drain, so that the condensate produced by the AirTap™ can escape. During periods of high humidity, the level of condensate can be up to 1 quart per day.



- 4. On most electric (or gas) water heaters, the inlet and outlet connections consist of two 3/4" nipples extending from the top of the tank. First, disconnect the hot outlet pipeline from the nipple, then using your pipe wrench, remove the 3/4" nipple extending from the hot outlet port of the water heater.

Step-by-Step Instructions

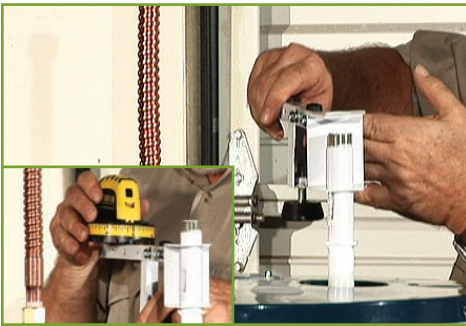


5. Locate the 1/4" nipple supplied with the AirTap™. Apply a layer of Teflon tape to the threads on one end of the nipple into the hot water port of the water heater. Tighten the nipple with the pipe wrench with enough force to prevent leaking under normal operating pressure.

NOTE: Occasionally the water heater will have a pre-installed plastic stopper in both the Hot and Cold ports. The stopper for the Hot port must be removed to allow clear passage. It is also common to find an Anode Rod to help prevent corrosion of the water tank. This should be removed as well and reinstalled in the Cold Port side. To do this, remove the Cold Inlet Pipe and nipple and attach the Anode Rod to the stopper within the port. Because you will be submerging copper tubing into the tank, it is important that this rod be replaced once every 2 years.



6. Before installing the mounting brackets, make sure to remove the nuts and bolts attached. Now screw the adjustable legs into each bracket.



7. Slip the two-hole bracket onto the hot outlet nipple. Using a level, make sure there is a slight slope of the bracket toward the front of the water heater.

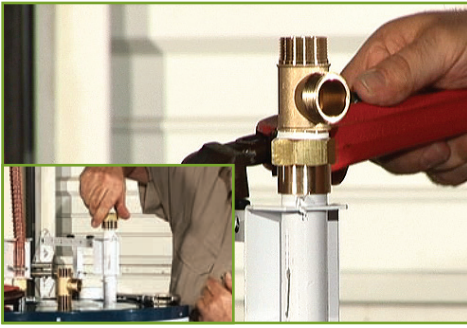


8. Now attach the forked mounting bracket to the cold inlet nipple. To do this, first remove the U-Bolt, and place the fork onto the nipple. Now screw the U-Bolt back in place, using the provided washers to keep the bracket tight. Make sure there is a slight slope toward the front of the water heater.

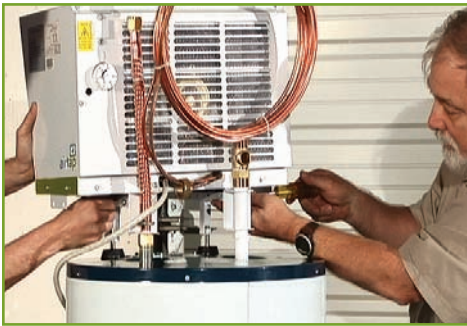


9. Make sure the two brackets are level with one another by placing your level across the two. Be sure to check that there is a slight slope to the front of the water heater. This slope is needed because it allows easy drainage of any condensation that may form on the AirTap™ unit. To test this slope, pour a small glass of water over the top of the unit and follow the path of the water flow.

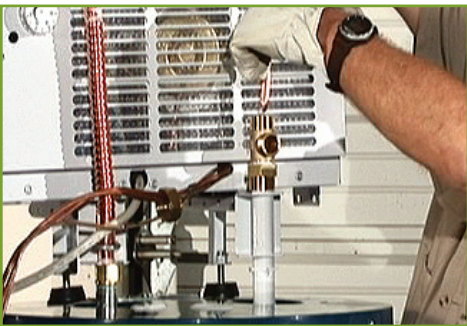
Step-by-Step Instructions



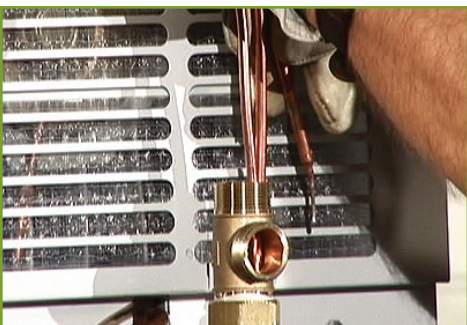
10. Put Teflon tape on the $\frac{3}{4}$ " nipple thread and attach the $\frac{3}{4}$ " Flange Adaptor to the $\frac{3}{4}$ " nipple. Tighten the Flange Adaptor with your adjustable wrench with enough force to prevent leakage. Put Teflon tape to all the threads of the 'T' Adaptor. Attach the 'T' Adaptor to the Flange Adaptor and tighten it using a pipe wrench.



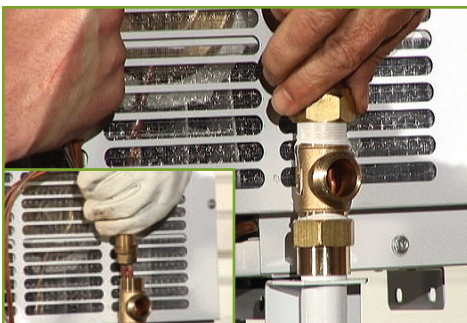
11. Now you can attach the AirTap™ to these brackets so that the unit rests on top of the existing water heater. You may need some help, as the unit weighs around 48 lbs. Determine where the AirTap™ will be positioned on the brackets by aligning the holes in the desired position. The AirTap™ should be positioned as close to the inlet and outlet nipples as possible for maximum stability (For gas water heater installations, the AirTap™ should be at least 1" away from the outer edge of the vent pipe.). Once this is determined, slide the two mounting bolts in the appropriate holes on the brackets and secure with the nuts provided.



12. Unwrap and carefully straighten the copper coil connected to the AirTap™. You may need some help for this. Insert the coil into the top of the 'T' Adaptor pipe previously installed, holding the two lines together. An initial jerk may be needed to push the tube. The tube will curl in the tank. Continue inserting the coil into the tank, but never try to force it in. If it gets stuck, gently give it a push until it continues into the tank. The thermostat bulb should be inserted at the end. Use extra care when you reach the thermostat bulb and make sure it is immersed along with the coil. Continue inserting until the entire coil is in the tank.

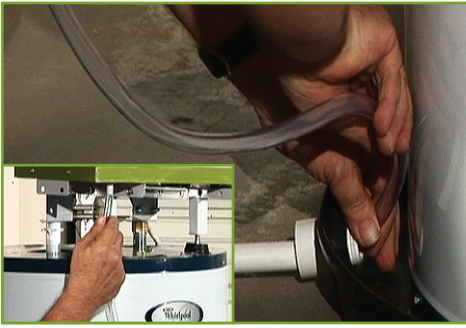


USE CAUTION during the immersion process to ensure that no crimping of the coil or thermostat capillary takes place, including the section from the insertion nipple to the back of the AirTap™. At no point should you allow the coil to curve with more than a 2" radius.



13. Apply teflon tape to the threads on the exposed end of the outlet nipple previously installed. Screw the brass female adaptor onto the nipple and tighten securely. Tighten all adaptors.

Step-by-Step Instructions

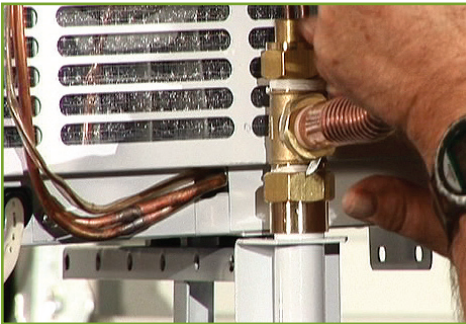


14. Now attach the drain hose to the AirTap™, and feed it through your drain line.

NOTE: Ensure that the AirTap™ tips toward the side of the drain so that water can flow out of the system. Be careful, if the AirTap™ isn't tipped enough to the side of the drain, you may have some flooding. Inspect the unit for a couple of days to make sure that the condensate water is not logging.



15. Find the copper tube that extends from the back of the AirTap™. Place the foam insulation pipe around this tube. You may also cover the hot outlet pipe coming out of the tank.



16. You can now reconnect the hot water line on the side, and turn on the cold water supply to the water heater. Once the air has escaped from the system, go ahead and turn off the faucet(s) that you had turned on.



17. This is a good time to check for leaks in the new connections.



18. You're ready to plug the AirTap™ into an electrical outlet, and set the thermostat to 130° F. You may need to lower the temperature if you feel it is too hot. If the tank is completely filled with cold water, it may require more than 3 hours before the water reaches the desired temperature.

Maintenance/Warranty/Support

The AirTap™ is designed so that the only maintenance required is removing and cleaning the air filter, located on the back of the unit, once a year. Another advantage of the AirTap™ is that while it harvests energy from the air, the unit will generate cool, dehumidified air expelled from the front of the unit, which can be great during those hot months. If you choose to take better advantage of this cool, dry air, you can capture and control it by ducting. Contact AirGenerate™ for more information using the e-mail address below.

The AirTap™ is recommended to be installed indoors in a location where the surrounding temperature is above 35° F. If you are still having problems installing your AirTap™ unit, turn to our Troubleshooting page for additional support.

Customer Support

Please contact AirGenerate™ for any technical assistance or questions.

AirGenerate™

5726 Clarewood Dr. Houston, TX 77081

Phone: 1(713) 574-6729 Fax: 1(281) 476-7432 E-mail: support@airgenerate.com, for support or to query about a new purchase.

Warranty

Air Tap™ Products purchased in the U.S. come with a one year limited warranty on the entire Air Tap™ Product, a two year additional warranty to replace defective parts and a five year warranty for the compressor only, with owners responsible for all labor and freight costs. This limited warranty covers defects in materials and workmanship in Air Tap™ Products. This limited warranty does not cover:

Problems from external causes such as accident, abuse, misuse, or problems with electrical power; servicing not authorized by AirGenerate™; Air Tap™ Product use that is not in accordance with Air Tap™ Product instructions; failure to follow exactly the Air Tap™ Product instructions, including installation instructions; failure to perform preventive maintenance; problems caused by using parts or components not supplied by AirGenerate™; and Air Tap™ Products for which AirGenerate™ has not been paid.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE (OR JURISDICTION TO JURISDICTION). AIRGENERATE™'S RESPONSIBILITY FOR MALFUNCTIONS AND DEFECTS IN AIR TAP™ PRODUCTS IS LIMITED TO REPAIR AND REPLACEMENT AS PROVIDED IN THIS AGREEMENT. ALL EXPRESS AND IMPLIED WARRANTIES FOR AIR TAP™ PRODUCT, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN TIME TO THE TERM OF THE LIMITED WARRANTY PERIOD. NO WARRANTIES, WHETHER EXPRESSED OR IMPLIED, WILL APPLY AFTER THE LIMITED WARRANTY PERIOD HAS EXPIRED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THIS LIMITATION MAY NOT APPLY TO YOU.

AIRGENERATE™ DOES NOT ACCEPT LIABILITY BEYOND THE REMEDIES PROVIDED FOR IN THIS LIMITED WARRANTY OR FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, ANY LIABILITY FOR THIRD-PARTY CLAIMS AGAINST YOU FOR DAMAGES. AIRGENERATE™'S LIABILITY WILL BE NO MORE THAN THE AMOUNT YOU PAID FOR THE AIR TAP™ PRODUCT THAT IS THE SUBJECT OF A CLAIM. THIS IS THE MAXIMUM AMOUNT FOR WHICH AIRGENERATE™ IS RESPONSIBLE.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

The limited warranty on Air Tap™ Products begins on the date of the packing slip or invoice. The warranty period is not extended if AirGenerate™ repairs or replaces a warranted Air Tap™ Product or any parts. AirGenerate™ may change the availability of limited warranties, at AirGenerate™'s discretion, but any changes will not be retroactive.

During the limited warranty AirGenerate™ will repair any Air Tap™ Products returned to AirGenerate™ that prove to be defective in materials or workmanship. If AirGenerate™ is not able to repair the Air Tap™ Product, AirGenerate™ will replace it with a comparable Air Tap™ Product that is new or refurbished.

Disclaimer

The information provided by AirGenerate™, including cost saving calculations, is believed to be accurate hereof. Individual cost savings can vary, and AirGenerate™ does not assume any legal responsibility for such variances. AirGenerate™ does not assume any legal liability or responsibility for faulty installations. AirGenerate™ does not assume any legal liability or responsibility for any personal injuries caused when lifting or handling the AirTap™ unit. AirGenerate™ expects users to follow the safety precautions listed in the Users Guide, and will not be held liable for accidents caused when these safety measures were unobserved. AirGenerate™ also expects users to adhere to the recommended procedure for installing the AirTap™, and will not be liable for alternative installation procedures. AirGenerate™ expects users to use caution when inserting the thermostat and copper tubes inside the water tank, because there may be minimal resistance and AirGenerate™ does not accept responsibility for broken thermostats or copper tubes. The warranty issued by AirGenerate™ will only be honored if the AirTap™ is being used for residential water heating. AirGenerate™ will not assume responsibility for other uses for the AirTap™ unit.

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