We’re delighted to have you as a customer.

Thank you...

...For becoming our customer.

We are pleased to serve you and offer you our most

Sincere Welcome.

By joining our family of satisfied customers, you
can be assured that we will do our best to merit
your continued confidence and goodwill.

Sincerely,

Mark Hicks

HICKS WATERSTOVES & SOLAR SYSTEMS

Waterstove Models 500/700/1000
Manufacturing Facilities
2649 South Main Street
Mount Airy, NC 27030
(336) 789-4977 · Fax(336)789-9451
www.hickswaterstoves.com
INTRODUCTION

The Hicks Waterstove is the easiest, safest, cleanest and least expensive way to heat with wood. Fuel costs can be reduced substantially! The Hicks Waterstove is also the most versatile heating system on the market.

The Hicks Waterstove is basically a steel tank in which water surrounds a firebox with boiler tubes. The water is heated by a wood or coal fire in the firebox. The entire waterstove, except for the firebox door and the clean out box, is insulated so that the water remains hot until needed. Nearly all the heat generated in the firebox and boiler tubes is transferred to the water.

The waterstove is non-pressurized, for safety and simplicity. A small pipe at the top of the stove vents off any steam which might be generated in the process of heating the water, and must remain open at all times. Any water which might evaporate can be replaced by simply turning the manual fill valve on and observing the water level in the sight glass until it registers the correct level and then turning the manual fill valve off. (This process is automatic on the optional UL listed stoves.)

The water in the tank is chemically treated to keep the water from rusting the metal and to clean all pipes and pumps through which the water travels. The water in the stove is circulated out of the tank only to heat exchangers, baseboard heat radiators. Independent water systems, such as domestic hot water, swimming pools, or hot tubs, are heated through additional water-to-water heat exchange coils inserted in the waterstove. This method of heat transfer allows separation of the different water systems.

When using wood it will usually be necessary to build a fire only once in the morning and once in the evening, if the stove is properly sized to the area it is heating. (Other determining factors are: amount and type of wood used per firing, the size of the house and how well-insulated it is, and the temperature you are attempting to maintain in your house.)

The owner of a Hicks Waterstove can provide his home or small business with heat and domestic hot water, plus take care to those special requirements, such as heating a shop, swimming pool, hot tub or greenhouse. No other heating system is this versatile!

INSTALLATION & OPERATING INSTRUCTIONS
WARNING: FAILURE TO ADD C-10 YEARLY AND INSTALL AND OPERATE YOUR WATERSTOVE IN ACCORDANCE WITH THESE INSTRUCTIONS WILL NOT ONLY VOID YOUR WARRANTY BUT MAY ALSO RESULT IN INEFFICIENT AND UNSAFE CONDITIONS.

CONGRATULATIONS!

You have selected appropriate solid fuel burning equipment to meet your present and future energy needs.

All solid fuel heating equipment should be installed and used exactly as recommended in this manufacturer’s installation and operations manual.

Have your equipment installed by a qualified installer. Even then, you should read this manual and double check to be sure the installer did not deviate from these instructions. The slightest change through installation could delay your installation or cause problems with your equipment. Save all these installation and operating instructions for future use.

Check with your local building code official, fire department, and insurance agent. They are usually in the position to provide vital information about safe installation and operation, and to inspect the entire system to help assure your family’s safety. Depending on where you live, a building permit and inspection may be required to legally install and operate solid fuel burning equipment. There may also be local code restrictions prohibiting certain types of installations. For these reasons, it is important to contact your local building code official before you choose your equipment.

HICKS WATERSTOVES OWNER’S MANUAL
SOLID FUEL HEATING RECOMMENDATION

WARNING: Heating with solid fuel can be dangerous if you do not exercise precautions regarding the purchase, installation, maintenance, and operation of your solid fuel equipment.

The recommended solid fuel to burn in your Hicks Waterstove is wood or high quality coal (if you have an ash pan with grate.)

The outside temperature and the temperature you wish to maintain in your home will generally determine the frequency of refueling. Other influencing factors will be the type of fuel used and how well your home is insulated.

INSTALLATION PLACEMENT

We recommend that your waterstove be installed in a separate building 40 to 100 feet from the house. To protect the exterior surface of the tank from weather conditions, the outside building should be constructed with four sides and a roof. The waterstove may be installed in your basement, provided there is enough room to do so safely, but you can get all the mess and danger from wood heating completely removed from your house by putting the waterstove in its own separate building.

If the waterstove building (or basement) is airtight, you will need to provide a fresh air inlet, as the fire must have sufficient air to burn and to exhaust. This inlet should be at least 12” x 12” and be connected directly to outdoors.

Since the Hicks Waterstove has an insulated water storage tank surrounding the firebox, only the door and the flue radiate heat outside the stove. The door, back cleanout box and flue can be hot while you are firing the waterstove. If you come in contact with any of these, they may burn you. Thus, the other areas of the stove require no clearance for safety, but only room to maintain the stove’s operation. For safety clearance requirements for door and flue, see “Smokepipe Installation”, pg. 14 of this manual.

WATER TREATMENT

A rust preventative is used to clean all pumps and pipes and to prevent the inside of the tank from rusting. If the rust preventative is not added yearly at the recommended levels, your warranty will be void. The only recommended water treatment for your Hicks Waterstove is listed below along with the proper installation and maintenance levels.

Rust Preventative: C-10 Rust Inhibitor
At Installation Add: 2 gallons per 500 Model Waterstove
                   3 gallons per 700 Model Waterstove
                   4 gallons per 1000 Model Waterstove

At least one gallon of C-10 should be added each year at the end of cold weather conditions. If frequent boiling of the stove occurs, another gallon of C-10 should be added. If for any reason the waterstove is drained of water, C-10 should be added at the same quantity of a new installation. Failure to add C-10 at recommended levels will void your warranty.

If you do have to drain the stove, be sure to prevent the treated water from getting into any clean water systems, such as wells, ponds or streams. We recommend that you pump the waterstove water into a holding tank until it can be pumped back into the waterstove.
**WARNING:** Failure to maintain adequate concentrations of rust preventative will result in the eventual rusting out of the bottom of your waterstove and will void your warranty.

**WARNING:** The addition of ANY chemical or additive other than C-10 can react to the C-10, make it ineffective, cause your stove to rust inside and void your warranty.

**WARNING:** C-10, also known as B-220, is listed as a “Hazardous Material”. A Material Safety Data Sheet is available upon request. Keep water treatment out of reach of children. Do not ingest. Do not allow contact with skin or eyes. Do not breathe vapors. If you get it in your eyes, flush with lots of clean water and see a physician. If it is ingested, call a physician and/or your nearest Poison Control Center. Ingredients are Sodium Hydroxide, Sodium Dichromate, Morpholine and Trisodium Phosphate.
INSTALLATION INSTRUCTIONS

ALL INSTALLATIONS SHOULD COMPLY WITH LOCAL AND STATE CODES.

A QUALIFIED HVAC CONTRACTOR SHOULD INSTALL THE WATERSTOVE AND PIPING.

A QUALIFIED PLUMBER SHOULD MAKE ANY CONNECTIONS TO YOUR DOMESTIC WATER.

A QUALIFIED ELECTRICIAN SHOULD BE HIRED TO DO ANY NECESSARY WIRING.

IMPROPER INSTALLATION MAY VOID YOUR WARRANTY.

Select a good location within 100’ or less from your house, if possible. Provide a 4” cement foundation with a shelter. Leave a 1’ round or 1’ square hole in the corner of the foundation to run pipes down through to the house. The door of the waterstove building should be big enough to get the stove in and out of the building. Place stove on foundation in desired position. Make sure stove is level, using metal shims under feet if necessary. Fill waterstove with water to within 4” of the top of sight glass. Install smokestack (see pg. 14 of this manual).

Dig a ditch from waterstove building foundation to house foundation at least 24” deep or deeper to get below the frost line in your area. Knock a hole through the house foundation for the piping assembly to pass through. This hole should be sleeved. Put insulated water lines through sleeve into crawl space or basement and on the other end, up through hole in waterstove building foundation and over to connections on waterstove. You may want to contain the insulated pipes inside a drain pipe. Four insulated pipes require a 6” drain pipe.

Attach domestic hot water supply and return to Cold Water Inlet and Hot Water Outlet on waterstove. Attach heat return zone to Heat Return valve along bottom row of fittings on waterstove. Attach pump to Heat Outlet along top row of fittings. Pump should be elbowsed down at least 18” from outlet to prevent steam from entering pump if stove boils. Make sure arrow on side of pump is pointed in direction of desired flow, down and away from stove. Attach heat supply pipe to bottom of pump flange.

On the other end of the system, run additional piping from foundation of house to cold water inlet piping on existing electric or gas water heater, or directly into DHW piping if you do not have a water heater (see diagram on pg. 20 of this manual).
DOMESTIC HOT WATER RETURNING TO YOUR WATER HEATER FROM THE STOVE MAY EXCEED 125° F. IF YOU DO NOT HAVE AN ANTI SCALD DEVICE ON THE HOT WATER OUTLET ON YOUR WATER HEATER, YOU SHOULD HAVE ONE INSTALLED AT THIS TIME TO PROTECT YOU AND YOUR FAMILY FROM POSSIBLE HOT WATER SCALDING.

Also, run additional piping to location of heat exchanger in duct work or to baseboard radiators. Make sure all sides of coil are sealed off, allowing air flow only through the coil, not around the coil. Connect the heat supply pipe from the waterstove to the inlet at the lowest point on the coil and the heat return to the outlet at the highest point on the coil. If heat exchange coil is to be installed in the ductwork of an existing furnace, install coil in the warm air outlet of the furnace. DO NOT install the coil in the cool air return of the furnace, as it may cause the fan motor to overheat. After water lines are tested for leaks, install new sheet metal over the hole in which the coil has been inserted in the ductwork. Attach this with sheet metal screws or pop rivets, being careful not to drill into the copper fittings on the coil, then reseal the duct to prevent any air loss. DUCT TAPE ALONE WILL NOT HOLD THIS METAL SECURELY.

If you do not have ductwork and are not installing ductwork, hot water baseboard may be used instead. If baseboard is to be pressurized, a water to water heat exchanger must be installed on the waterstove. If new baseboard is being installed, connect heat supply from waterstove to inlet side of first baseboard unit and the heat return to the outlet side of the last baseboard unit and connect all units in between to each other in series.

Install new thermostat and relay (see diagram on pg. 19 of this manual). If an automatic forced air draft assembly came with your waterstove, install the Aquastat (hot water control) and blower (see diagram on pg. 21 of this manual).

Using paper, kindling and dry wood, build a small fire, adding to it as necessary to bring the temperature up. As you heat the stove for the first time and if the water temperature falls below 100° F, it is normal to see condensation in the firebox and in the cleanout box. When temperature gauge reaches 150° F, turn thermostat on to circulate water to check for leaks. Repair any piping leaks, if needed. If return line fails to heat up, there may be an air blockage in the system. Air can be purged from the lines by cutting the thermostat off, closing the Heat Outlet valve, and opening the Manual Fill valve until you hear air entering the bottom Heat Return valve. Once you no longer hear air bubbling up, shut off the Manual Fill valve. THIS WILL ADD EXTRA WATER TO THE STOVE. IF THE STOVE IS OVERFULL, DRAIN OFF EXCESS WATER UNTIL WATER IS AT PROPER LEVEL IN SIGHT GLASS.

When water is at 4” from top of stove, any piping leaks have been repaired and air has been purged from the system, add water treatment through open vent on top of stove. Insulate all bare water piping.
IMPORTANT: Like other central heating systems, your waterstove system requires electricity. For those wintry times when your electric utility company cannot provide you with electricity, you will either need a generator to power the pump on your waterstove and your furnace fan or you will need some other source of heat, such as a wood stove, fireplace or kerosene heater to keep you and your pipes from freezing. Everyone should have a back-up heat source that does not require electricity.
MAINTENANCE PROCEDURES

Although the Hicks Waterstove is designed for minimum maintenance, close attention to the operation of your system will yield more satisfying results. It is wise to inspect your system periodically, using the following checklist:

1. Check all piping to be sure there is no leaks. Check all pipe for excessive heat loss. Replace or repair any bad pipe insulation.
2. Listen to your transformer relay occasionally. If it begins to “chatter” when it clicks on, it needs to be replaced.
3. Rust preventing additive should be added once yearly (see pg. 3). Failure to add C-10 will void warranty.
4. If you have a hot water control on your stove for forced air draft occasionally check the control to determine if it is cutting on and off at desired temperature differential, referring to the temperature gauge for more accurate readings.
5. Make sure flue tubes stay in clean working condition, without leaks or creosote buildup. At least once a month, and more often if you are not using the best grades of wood, you should push your clean out brush all the way through each horizontal flue tube and then pull it all the way back. Do not let the flue tubes become so clogged that it is difficult to push the brush through, do not try to reverse direction while the brush is inside the flue tube and do not try to twist the brush, as any of these can damage the brush.
6. Whenever you clean the flue tubes in your stove, you should also scrape the clean out box down to the metal, paying particular attention to the area below the flue tubes where the clean out box attaches to the tank. Once or twice a year, you may want to repaint the clean out box, inside and out, with high heat black spray paint to prolong the life of the clean out box.

WARNING: Failure to clean the clean out box regularly may result in the ruination of your stove and may void your warranty!

7. When wood burns slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire. The chimney connector and the chimney should be inspected at least once every two months during the heating season to determine if creosote buildup has occurred. If creosote has accumulated, it should be removed to reduce the chance of a chimney fire.

8. Periodically during the off season, turn the thermostat on to allow the pump to operate for five minutes to reduce the likelihood of pump malfunction.
SOME DO’S AND DON’TS

**DO** follow installation and maintenance instructions in this manual.
**DO** inspect your equipment often and make necessary repairs.
**DO** teach children to respect your equipment and **DON’T** allow them to operate it.
**DO** build small fires for the first few days, until you become familiar and comfortable with the operation of the waterstove.
**DO** make sure the proper fuel is used with the waterstove.
**DO** burn seasoned hardwoods, using paper or cardboard as only fire starters.
**DO** provide adequate combustion air to burn the fuel properly. Learn to use the draft controls to maintain proper airflow patterns for the type of fuel being used.
**DO** keep firebox door and ash pan door, if you have one, closed whenever there is a fire in the firebox.
**DO** have a workable dry chemical fire extinguisher readily available near your stove.
**DO** clean out flue tubes, clean out box and chimney frequently.
**DO** dispose of ashes in a metal container with a tight fitting lid and keep ashes and container away from combustible materials, including combustible floors, since hot sparks and burning embers can remain in ashes for several days. After they are completely cooled, ashes may be buried or added to compost pile or hauled to landfill.
**DO** place a metal bucket under the clean out box to catch any condensation.
**DO** keep clinkers cleaned out of grate when burning coal to allow air flow through grate. Once a year, lift grate, remove ash pan and thoroughly clean ash pan trough.
**DO** allow a hot water spigot, during extremely cold weather, to drip slightly but continually to prevent freezing of water lines due to wind chill.
**DON’T** overfire the stove. Keep water temperature under 200° F.
**DON’T** touch the door, cleanout box or any exposed metal when there is a fire in the firebox. They could be extremely hot and may burn the skin instantly.
**DON’T** keep kindling, newspapers or other flammable materials near the firebox door or the cleanout box. A stray spark could set them on fire.
**DON’T** use gasoline, kerosene, charcoal starter or other flammable liquids to start or restart a fire.
**DON’T** hook waterstove to a chimney that is in use with any other appliance.
**DON’T** dispose of ashes in a combustible container or dump ashes with ordinary trash.
**DON’T** start a fire in the waterstove unless the tank is filled with an appropriate amount of water.
**DON’T** use any type of water treatment other than C-10. If you do, it WILL void your warranty.
**DON’T** drain the storage tank and leave it dry. A dry tank will corrode rapidly.
**DON’T** allow open vent to be capped, plugged or in any way closed off.
**DON’T** burn plastic or any type of trash or garbage in your waterstove.
**DON’T** let ashes build up into grate, as this shuts off air flow under the grate.
**DON’T** use anti-creosote chemicals in your waterstove. They can attack the metal in the firebox and tubeset, causing them to corrode.
**DON’T** allow anyone who is unfamiliar with the waterstove to operate, service or do maintenance on your waterstove.
FIRING YOUR WATERSTOVE

Start a fire with a small pile of paper under some small kindling. Open draft knobs fully for air intake. When optional draft fan assembly is available, use it for assistance. When kindling is burning, add small amounts of dry wood and build gradually to a hotter fire. The Hicks Waterstove will accept wood up to 34” in length.

To increase the efficiency of the horizontal flue tubes, try to keep the fire at a moderate to high heat, providing enough air to the fire for complete combustion and cleaner exhaust. An oxygen deprived fire increases the smoke and creosote buildup, which can reduce or block the draft, resulting in a smoke filled area and the release of carbon monoxide gas. It also provides the fuel for dangerous chimney fires.

Creosote is caused from the condensation of the vapor that exists within escaping smoke. The amount of vapor depends on the moisture content of the fuel. The clean out box on the waterstove has a drain in the bottom for the purpose of letting the liquid creosote drain out. Set a 5 gallon non-combustible bucket under this drain. Down drafts also aid in the formation of creosote. “Open vented” chimney caps will often correct a down draft problem. It must be noted, however, that this will not correct problems resulting from a poorly constructed flue pipe or one needing cleaning or repair.

To reduce the risk of fire, accumulated creosote must be cleaned and removed from the stove. Hicks Waterstoves will not accept liability, implied or otherwise, for creosote fires.

A glowing red flue pipe is a danger signal. NEVER stoke up the fire so hot that the flue pipe turns red. If it should turn red, cool the fire quickly by closing the draft knobs and turning off the draft fan. If that does not cool it fast enough, use a dry chemical fire extinguisher to put out the fire.

Softwoods like pine, spruce and fir are easy to ignite. They burn rapidly with a hot flame and burn out quickly. For a longer lasting fire, use heavier hardwoods, such as ash, beech, maple and oak.

Select wood to burn that has been seasoned for a year or more. Dry, seasoned wood has a greater BTU value than green wood or wet wood. Burning unseasoned wood may increase creosote buildup, thus necessitating more frequent cleaning and reducing the efficiency of your waterstove.

In the event of a power loss, turn fan switch to off. Try to determine why there is no power. When it is safe to turn power on, do so and resume safe operation.
QUESTIONS AND ANSWERS

1. How often do I have to add wood to the Hicks Waterstove?

   Twice a day, ordinarily. Unless the outdoor temperature is very cold or there is an unusually high demand for hot water, once in the morning and once in the evening is sufficient during the winter months. In warmer months, once or twice a week is sufficient to supply you with hot water.

2. How often will I have to clean out the boiler tubes?

   About once a month during the heating season. Hicks Waterstoves come with a cleanout brush.

3. How do I remove the ashes from the firebox?

   With a flat point shovel, just as you would with any other type of woodstove. The big difference is that, with a Hicks Waterstove, all the mess stays outside your home or business. We also offer an optional ash pan assembly.

4. Why doesn’t the firebox rust out, since it is surrounded by water?

   A chemical water treatment coats the metal, creating an oxygen barrier that prevents the oxidation that causes rust.

5. How about emissions? How badly does a waterstove pollute the air?

   Other things being equal, the Hicks Waterstove will produce less smoke and particulates than the average woodstove. If you burn only dry wood and burn it hot, there should be little pollution produced. When wood is burned, it produces no more carbon emissions than if it were allowed to lie in a forest and rot, so using wood as a fuel is considered carbon neutral and is a renewable source of heat.

6. Why doesn’t the water in the waterstove and the pipeline freeze if the waterstove is left unattended for a week in subzero weather?

   The pipelines are snugly insulated and buried below the frostline. The Hicks Waterstove is well protected by two inches of Celotex insulation all around the tank and is enclosed in a building. The house or business being heated by the waterstove would freeze (water lines, plants, etc.) long before the waterstove itself. We know of no instance in which a waterstove has frozen. In the very unlikely event that such did occur, there is ample space at the top of the tank to allow for the expansion of the water molecules as they turn to ice.
7. **Is the Hicks Waterstove UL approved?**

We offer UL listing as an option. Although UL listing is required for all NC inspections, many other states and localities do not require it. Our standard stove is not UL listed, but it is built in conformance with all pertinent NC codes. The Hicks Waterstove has been customer approved for over 3 decades and has been proven to be the safest, cleanest and most economical way to heat with wood.

8. **Where do I put my Hicks Waterstove?**

Waterstoves should be placed on floors of noncombustible material. Although the Hicks Waterstove can be set in your basement if the basement is large enough, the usual, and recommended, procedure is to locate the waterstove in an outbuilding some distance from your home or business. One of the great advantages of a waterstove is that the mess and danger of your heating system is out away from the building being heated.

9. **What size outbuilding do I need?**

A 12’ x 16’ building will accommodate a 500 gallon, 700 gallon or 1000 gallon Hicks Waterstove and provide room for maintenance of the waterstove and room for storage of wood.

10. **How far from my home or business can my waterstove be set?**

Although we have run pipe lines over 200’ away and other times, set stoves right next to the building being heated, we do not recommend either extreme. We recommend that the waterstove building be located between 40’ and 100’ from the building being heated.

11. **How thick should the cement slab be to support the weight of the Hicks Waterstove?**

At least four (4) inches

12. **How wide and deep should the ditch connecting my Hicks Waterstove to my home or business be?**

Six (6) inches wide and thirty (30) inches deep

13. **In case I get the waterstove hot enough to steam off some of the water, how do I add water back to the Hicks Waterstove?**

By opening the Manual Fill valve between the Heat Outlet and the Hot Water Outlet on the side of the stove. When the sight glass shows the water level of the waterstove to be as desired, cut the Manual Fill valve off. There is a check valve at the Manual Fill valve that prevents the treated water in the waterstove from flowing back into your domestic hot water line. The fill process is automatic on the optional UL listed stove.
14. **What other maintenance is required on the Hicks Waterstove?**

Rust preventing C-10 water treatment should be added at the rate of 1 gallon per year per stove up to a 1000 model. Before pouring chemical into Open Vent on top of stove, make sure the pump is cut off to prevent backsplash. **WARNING:** Failure to add C-10 at recommended levels will void your warranty. If you purchase your C-10 from anyone other than Hicks Waterstoves, you should send a copy of your receipt to:

Hicks Waterstoves and Solar Systems  
ATTN: C-10 Warranty  
2649 South Main St.  
Mount Airy, NC 27030

15. **I have a heating system already. Can I hook the Hicks Waterstove up to it?**

Except for electric baseboard, all existing heating systems can be converted to a Hicks Waterstove system without much trouble. Our waterstoves can also be used to heat greenhouses, pools, hot tubs, etc.

16. **What is the main advantage of a Hicks Waterstove?**

It is two appliances in one, providing both space heating and domestic hot water. Another advantage is that it can be used as a storage tank.

17. **Why should I buy a Hicks Waterstove?**

Because of our superior products and our superior service. We have proudly produced waterstoves for over 30 years.

18. **What all do I need to install a Hicks Waterstove?**

You will need the basic stove itself, along with any options you may choose, a chimney assembly and C-10 water treatment for the stove. Inside the home or building, you will need hot water baseboard radiators, a heat exchange coil for your ductwork, or a unit heater. To connect the stove to the heating elements, you will need a pump, a thermostat, a relay, pipe, pipe fittings, pipe insulation and electrical wire. An installation kit is available for purchase that contains all you will need, except for wire.

19. **What do I do if I get my waterstove too hot?**

First, close the drafts. If you notice the temperature approaching 200° F and there is still a hot fire in the firebox, turn your thermostat up and waste some heat. Open a door or window, if necessary. If the stove is already boiling before you notice the rise in temperature, turn the thermostat down so that the pump will not try to pump steam and damage the impeller. You can waste the extra heat by washing a load of
laundry on extra hot setting, taking a hot shower, etc. or by adding water to the stove through the Manual Fill valve. Once the temperature on the stove falls below 200°F, you may turn your thermostat back up.

SMOKEPIPE INSTALLATION

A. If the waterstove is located in a separate, non residential building, 8” single wall flue pipe may be used if it is placed inside a 10” air space pipe where it goes through the roof, as illustrated below:

Flue pipe should extend at least 3’ above the roof and at least 2’ higher than anything within 10’ of the chimney. Airspace pipe should extend at least one (1) foot below ceiling and at least one (1) foot above the roof. Flue pipe should be at least 18” from any combustible material. Air space pipe should be at least 9” from any combustible materials. Both flue pipe and air space pipe should be at least 24 gauge sheet metal. We recommend 24 gauge Stainless Steel or 1/8” thick black steel tubing as the flue pipe.

B. Factory built Stainless Steel lined double wall flue pipe may be used in lieu of the arrangement shown in A. Clearance to combustibles should be at least 9”

C. If waterstove is placed in a building attached to a residence, factory built triple wall flue pipe must be used. Clearance to combustibles can be reduced to no less than 2”, unless otherwise recommended by the triple wall manufacturer.

D. A #1 style waterstove has a clean out box on the back of the waterstove that also supports the flue pipe. All surfaces of this clean out box should be at least 18” from any combustibles. CAUTION: The clean out box may be hot during operation.

E. When closed, the firebox door should be at least 3’ from any combustible materials. For more convenience when loading the firebox, an even greater distance may be desired.

F. Proper maintenance of your flue pipe is a must if you want to avoid a disastrous fire. This involves frequent inspection and cleaning of the pipe to remove excess creosote.
NOTE: All areas of the flue pipe assembly that might allow rainwater to enter stove building (in the drawing on page 14, where rain collar joins flue pipe, where air space pipe joins flashing and where flashing joins to roof) should be sealed with industrial grade high temperature silicone or equivalent to prevent rainwater from corroding flue pipe and cleanout box and/or damaging roof and ceiling.

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MAINTENANCE SCHEDULE

DAILY
Check water level, rake ashes level in firebox. Keep wood at least 6 inches back from firebox door.

MONTHLY
Check door fit and rope, inspect chimney firebox, clean out box, brush flue tubes, remove ashes, clean and scrape firebox, inspect furnace filter and clean or replace if needed.

ANNUALLY
Clean firebox, chimney, clean out box, brush flue tubes, and firebox flue at end of burn season. Ensure water treatment procedure is followed.
USE OF CROSOSE TO REMOVAL PRODUCTS CAN DAMAGE STOVE METAL AND WILL VOID YOUR WARRANTY.

Refer to Owner’s Manual for complete details

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120 VOLTS 60 Hz 1 phase
MIN CIRCUIT Ampacity 15 Amps
MAX CIRCUIT Ampacity 20 Amps
1. Sight Glass and Valve
2. Temperature Gauge
3. 14-2 UF-B Wire Power Supply for Pump # 1 (to Relay at Furnace)
4. 120 V Relay
5. 18-2 Thermostat Wire (to Thermostat)
6. 14-2 Wire (to Fan)
7. 110 VAC Power Supply (from Furnace Power)
8. Firebox Door
9. Clean Out Box
10. Draft Fan Aquastat
11. Fan Off/On Switch
12. Draft Fan

Line A. Cold Water Supply (From Domestic Water Heater)
Line B. Hot Water Return (To Domestic Water Heater)
Line C. Heat Return (From Top Fitting of Furnace Coil or Baseboard)
Line D. Heat Outlet (To Bottom Fitting of Furnace Coil or Baseboard)
   E. Open Vent- Must Remain Open!
   F. Manual Fill Valve

Pump # 1: Heat Zone
Draft Fan Wiring Diagram

Incoming power
120Vac/60hz/1 phase
Minimum 14 ga copper wire
15 amp circuit
18-2 Thermostat Wire
To R, W Terminals in Thermostat

Ground
White (Neutral)
Black (110 V)

From Furnace Power

Transformer Relay For 110 Volt Oil or Gas Furnace

New Thermostat

To Pump #1
120 V From Other Source
Black
White
Ground
White
Black

Red 24V

Green (Fan) Wire to Terminal Strip

Blue (Common) Wire

Terminal Strip
Or Low Voltage Connections At Air Handler

Green (Fan) Wire From Existing Thermostat

24 Volt Relay for 220 Volt Heat Pump Or Gas Pac
Water Heater Bypass

Ways to Operate

Normal Operation:

Valves 1 & 3 Open, Valve 2 Closed

Cold Water Is Diverted To Waterstove, Goes Through Domestic Hot Water Coil in Stove and Returns Hot to Water Heater's Cold Water Inlet

If There is a Problem:

Valves 1 & 3 Closed, Valve 2 Open

Cold Water Goes Directly in to Water Heater