



breeo

# HECO COOKSTOVE

MODELS 420 AND 520

## OWNER'S MANUAL

**Before you install or operate a Heco Cookstove you must:**

- Read all instructions carefully
- Install smoke and carbon monoxide detectors

# INTRODUCTION

Congratulations on the purchase of your new Heco Cookstove! We hope that you will really enjoy heating and cooking with your new cookstove.

## Our Story:

The Heco Cookstove originally started as an idea. Amos Stoltzfus, owner of Breeo, LLC, had a vision for a cookstove that would be easy to use, attractive, and last a lifetime. The idea for this cookstove gradually morphed into a reality as the project went from ideas, to drawings, to actual fabrication. The Heco Cookstove challenges an industry that has seen few if any improvements or modifications in the last 20 years, with many cookstoves remaining unchanged despite advances in clean burning technology. The clean lines, and more simplistic, modern design of the Heco Cookstove is part of the plan to truly bring innovation to the cookstove market. The stove burns wood or coal, allowing for unparalleled flexibility of fuel choices. The oven can be easily controlled for consistent baking and cooking temperatures. All of the exterior parts are porcelain coated for a beautiful smooth finish. The heco cookstove is designed to be used for generations. Worn porcelain parts can easily be replaced and modifications and options abound. For example, a customer can choose glass doors to add ambiance to the room the stove is in, or add an extra water heater. The stove’s designer, Amos Stoltzfus has 20 years of metal fabrication experience and 15 years of stove design and production experience. The Heco Cookstoves are manufactured at Breeo’s headquarters in Lancaster County, PA.

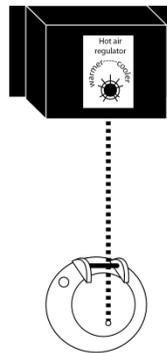
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## Outer Parts

**Primary** - This Bimetal Regulator is used to adjust the Primary Air. Primary Air is the main draft that enters into the stove, under the grates in the fire box, to add oxygen to the fire. This control is used less when burning wood as wood needs 80% Secondary Air. It's not uncommon to only use Secondary Air when burning wood.

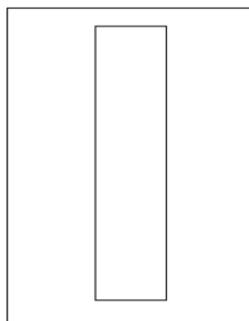
**Secondary Air** - The Secondary Air Control is on the left side of the stove and feeds the Secondary Air Reburn Tubes located at the top of the fire box, as well as the air wash located at the front of the fire box. The air wash works as the primary air when burning wood and keeps your fire door glass clean when open. When burning coal, set the secondary air at approximately 50%. **DO NOT CLOSE SECONDARY AIR WHEN BURNING COAL AS THIS COULD RESULT IN GAS EXPLOSIONS!** Pull the secondary air handle out to provide more air flow in the fire box and to keep your fire door glass clean. Push the secondary air handle in to decrease the air flow in the fire box.



**NOTE:** The cookstove comes with a wood plate installed. It is designed for wood burning only. Always be sure to remove wood plate when burning coal.

### Wood Plate

NOTE: Remove when burning coal



## **SAFETY INSTRUCTIONS**

1. Read all instructions before installing or operating any heco cookstove
2. You must install smoke and carbon monoxide detectors before you install or operate any furnace. Check your local codes, this installation must meet their rulings.
3. Do not open bottom ash door to increase draft. It is designed only to empty ashes.
4. Never leave heco cookstove doors open when cookstove is unattended.
5. Do not hook up to an aluminum Type B gas vent. Use a code approved Class A chimney with a 6" diameter (minimum) to 8" (maximum), and minimum of 20" high
6. Before you ignite your cookstove, be sure to inspect chimney for any cracks or leaking liners, as this will affect the draft.
7. Clean chimney before installing cookstove. If there is creosote attached to the liner you could create a serious chimney fire.
8. Never leave children unsupervised when they are in same room as cookstove. Provide a sturdy barrier to keep children and pets a safe distance from the cookstove, or they could get burned.
9. Keep cookstove area clear of all combustible materials, gasoline, and other flammable vapors and liquids.
10. Use the required floor protection as shown on safety listing on back of cookstove
11. Check the clearance to combustible walls and floors as shown seen on safety listing (see page 7)
12. Do not allow anyone who is unfamiliar with cookstove to operate it.
13. Spend time with your cookstove to become acquainted with the different settings and how each will affect its burning patterns. It is impossible to state how each setting will affect your cookstove.
14. Be extremely careful when removing the cookstove ash pan. It may be extremely hot!
15. Make sure your stove pipe has at least 3 screws per joint.
16. Do not install this cookstove in a mobile home or trailer.
17. Do not use a manual, barometric or automatic damper when burning wood.

## Operational/Work Practice Standards

1. When burning wood, burn only dry seasoned cord-wood, with 20% moisture content or less. Then warmed before firing. (Warming cordwood means placing near stove for 1 day before burning)
2. Keep wood under cover: in a wood shed, or a tarp
3. Right after delivery: stack cord-wood under cover
4. Split cord wood before drying
5. Do not burn green wood, it needs to have no more than 20% moisture
6. All firewood must be seasoned at least 1 year
7. Check wood moisture at least once a week.
8. Keep a 2" to 3" ash layer on top of grates when burning wood. Note: Do not cover louvers
9. The cookstove is designed to burn air-dried wood and coal at a predetermined firing rate. Over firing occurs when the ash door is left open during operation or a highly volatile fuel, i.e. large amounts of small kindling are used. Do not exceed 600 degrees on top of cookstove.
10. Open firebox door slowly to avoid a "flashback"
11. When you load wood into cookstove, fully open draft until new wood ignites and then set to normal burn, this will preheat the wood and the secondary re-burn will work better.
12. With new steel there is a small amount of oil or dirt on the metal. You may smell an odor. This is normal during the first operation. You may want to assemble the cookstove outdoors and build a small fire in it to "BURN OFF" this dirt and oil before installing the unit.
13. Be extremely careful when removing cookstove ash pan. It can get very hot!
14. Check the fit on the firebox door. It must fit tightly, if it does not, check for deterioration or wear of the ceramic rope seal. Replace defective seals.
15. Inspect and clean your chimney and stove pipe regularly
16. In the event of a chimney fire, shut all draft controls and call your fire department immediately. Alert everyone in the house. If flue is still burning vigorously, throw baking soda into firebox or discharge a fire extinguisher into firebox. After the chimney fire is over, have a certified chimney sweep completely inspect your system for damage for further use.
17. Slow fires: it is not recommended to burn the heco cookstove more than necessary early in the fall and late in the spring, as you cannot keep the fire box hot enough to burn gasses. (without overheating your home) Slow fires can cause excessive creosote buildup in firebox, stove pipe and chimney.
18. Equip your home with fire extinguishers, carbon monoxide and smoke detectors
19. Do not burn garbage, gasoline, or any other flammable liquids in this cookstove.
20. This is a wood and coal burning cook stove and should not be altered in any way.
21. Do not burn the cookstove over 800 degrees surface temperatures or the warranty will be void!

**NOTE:** When burning coal, shake ashes every 12 hours if possible. You must keep your ashes cleaned out from under grating. This may require emptying your ash pan daily. If there is no air space under the grates, the grates will warp and become inoperable.

### **Testing Cookstove Before Lighting**

To test your draft: Place a piece of newspaper inside of furnace and light it.

### **Starting a Coal Fire**

Remove wood plate that sits on the grates. It will not burn coal with wood plate. Set oven bypass to cooking mode. Fully open bimetal regulator and air wash. Place crumpled paper and kindling wood on a grate and ignite with a match or lighter. Use a good amount of kindling to get the fire started. Add larger pieces of wood to get a hot fire. Once you have a hot fire, add 2" of coal over the entire grate area. As the coal starts burning and glowing red add another layer of coal. Keep adding coal until you have an 8" body of fire. You can now add 30 lbs. of coal and adjust draft on bimetal regulator to meet your needs.

**NOTE:** You can also use charcoal briquettes for a fire starter.

### **Starting a Wood Fire**

Install wood plate. This will hold up the ash bed.

When starting a wood fire use the same steps as starting a coal fire above, but do not add coal. Allow ash to build up on top of grates; this will not choke fire until it covers louvers. Keep approximately 2" to 3" of ash on grates at all times. Air wash will work as primary air. Adjust to meet your needs.

### **Creosote – Formation and need for removal**

When wood is burned slowly, it can produce tar or other organic vapors, when combined with expelled moisture will 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 twice monthly during the heating season to determine if a creosote buildup has occurred. If creosote has accumulated, it should be removed to reduce the risk of a chimney fire.

**Note:** Firewood must be seasoned for one year. That means that cut, split and stacked under shelter with sides open so the wind can dry it. Wood needs to have no more than 20% moisture. Stack indoors 1 day prior to burning. **DO NOT** shut primary air supply or it will smolder fire and creosote

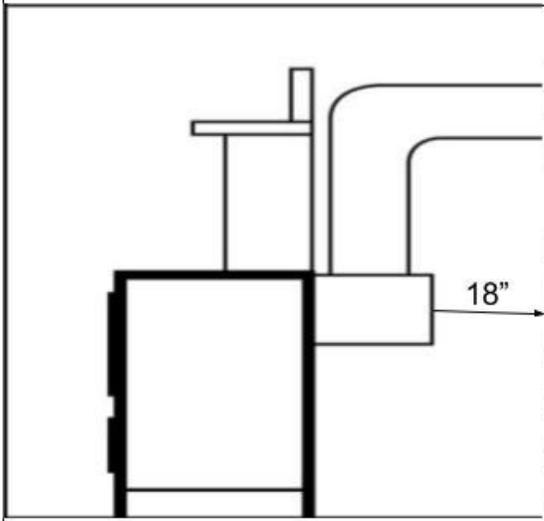
## LOCATING COOKSTOVE

1. The cookstove must be located on a non-combustible floor. If you have a combustible floor it is required. Use a code approved non combustible floor board (Type 1 Board)
2. It's recommended that the cookstove be centrally located.
3. Locate and read label on cookstove before installation. The most important consideration in installing your cookstove is adequate clearance between the cookstove and any combustible surface. A cookstove that is placed too close to a wall or to furniture can cause a fire.
4. The hearth must extend out at least 15" from the front and 8" from the rear and sides of the fuel opening. It also must extend under 2" beyond either side of the stove pipe if it's elbowed towards a wall (see page 4).
5. The cookstove must have its own flue. Do not connect this unit to a chimney flue serving other appliances.
6. Connection of the cookstove to the chimney should be made as directly as possible (6 feet maximum horizontal) and not more than two bends when needed, should be used. No reduction in flue pipe below 6" in diameter should be used. The pipe connecting the cookstove to the chimney should be at least 24 gauge. Thicker gauges are available and will resist corrosion longer and need fewer replacements. Slope the flue pipe back towards the heater, 1/4" per foot of horizontal run. That way any condensation forms in the pipe it will be carried back into the heater. The connector pipe should be installed so that the upper pipe section fits inside the lower section. This way any condensation building up inside the pipe will stay inside the pipe as it flow down inside surface. Horizontal pipe runs should have the pipe seams turned up. Particular attention should be paid to the point where the flue passes through a wall or ceiling. This penetration should always be made with thimble, insulated pipe, and then proper accessories following manufacturer's instructions. Chimney connectors must not pass through the ceiling, concealed spaces, or enter the chimney in the attic, unless proper clearance or insulated pipe is used following manufacturer's instructions.

**REMEMBER** that all pipe sections should be connected at least 3 sheet metal screws per joint. A fire in the stack may cause vibration and poorly fastened piping may come apart causing an extreme fire and smoke hazard. Do not extend stove pipe past the inside edge of the flue liner. If you have a manufactured stainless steel chimney, attach stove pipe to stove pipe adapter. Where the pipe connects to a masonry chimney the flue to the chimney should be larger than the stove pipe so you can insert the pipe out to the inside edge of the chimney, but not past. Then seal as tight as possible and cover with a stove pipe collar.

**Caution:** keep all furnishing and other combustible materials away from the stove

**Caution: Do not store combustible or flammable material near cookstove**

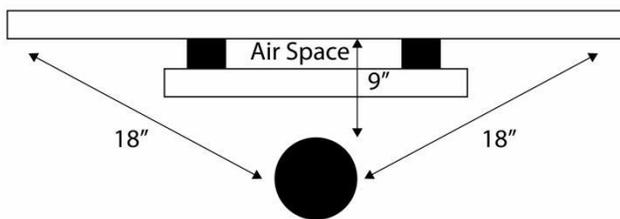


| Specifications                   | 420           | 520           |
|----------------------------------|---------------|---------------|
| Unit to left wall                | 18" / 457 MM  | 18" / 457 MM  |
| Unit to back wall                | 18" / 457 MM  | 18" / 457 MM  |
| Unit to back wall w/ heat shield | 12" / 305 MM  | 12" / 305 MM  |
| Unit to right wall               | 12" / 305 MM  | 12" / 305 MM  |
| Front                            | 48" / 1220 MM | 48" / 1220 MM |
| Unit to ceiling                  | 36" / 915 MM  | 36" / 915 MM  |
| Chimney connection to wall       | 18" / 457 MM  | 18" / 457 MM  |
| Corner Installation              | 10" / 254 MM  | 10" / 254 MM  |

**Locating Cookstove**

This cookstove is to be installed maintaining clearances as shown in the illustration above.

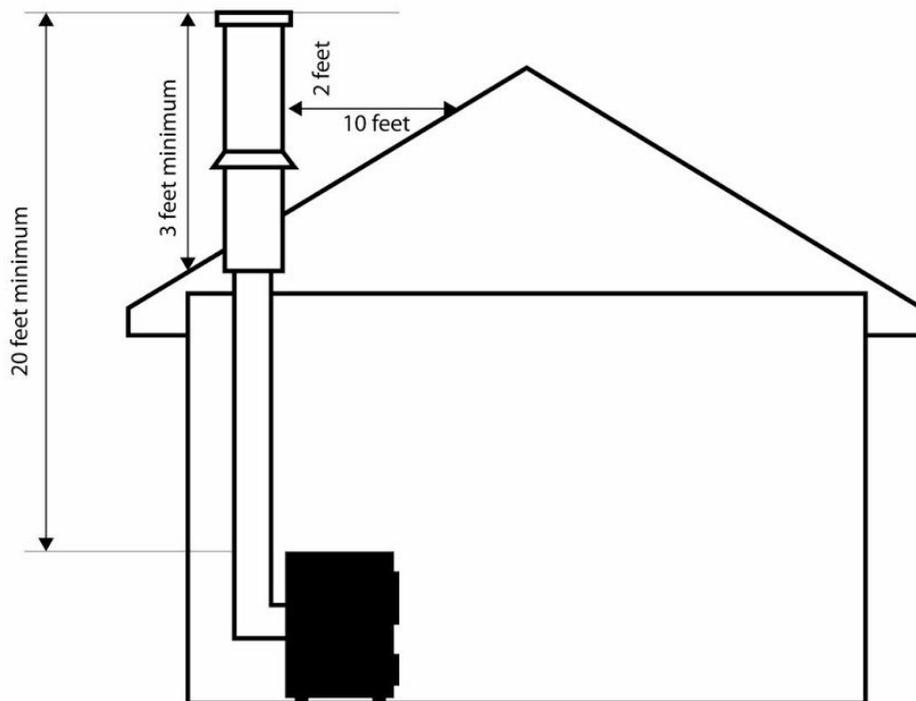
1. Set the cookstove on a solid non combustible floor
2. Use a code approved non combustible floor board (Type 1 Board)
3. The material must extend at least 15" in front of, 8" on either side of, in back of and underneath of the chimney connector. It should also extend at least 2" on either side of the chimney connector



According to NFPA Standards single walled stove pipe can be within 9 inches of combustible provided an approved fire retardant material, covered with 28 gauge sheet metal, spaced out 1" on non combustible spacers is utilized.

# CHIMNEY REQUIREMENTS

The minimum height of a chimney system for the Heco Cookstove is 20 feet. The chimney must exceed the roof of a house at a minimum of 3 feet at any point of exit. In a pitched roof installation of the chimney must be 2 feet higher than anything within a 10 foot radius of the chimney. It is important to have a chimney draft of 0.06 water column. It is required to abide by the manufacturer's instructions on Class A chimneys as well as local building codes. It is not recommended to build a chimney on an addition that is lower than the main part of your house. Do not extend the stovepipe past the inside of a masonry chimney liner. Never connect this unit to a chimney serving another appliance.



1. The cookstove should be the only heating appliance using a chimney. One cookstove per flue.
2. A masonry chimney should be a chimtek or stainless steel liner
3. The masonry chimney should not have any missing mortar or loose bricks
4. There should not be any mortar or parts of the chimney blocking the chimney flue
5. There should be a two inch clearance between any chimney except chimtek has zero clearance
6. The chimney should extend at least 2' above the highest point of the house, or 2' above the point at which the chimney is 10' from the roof

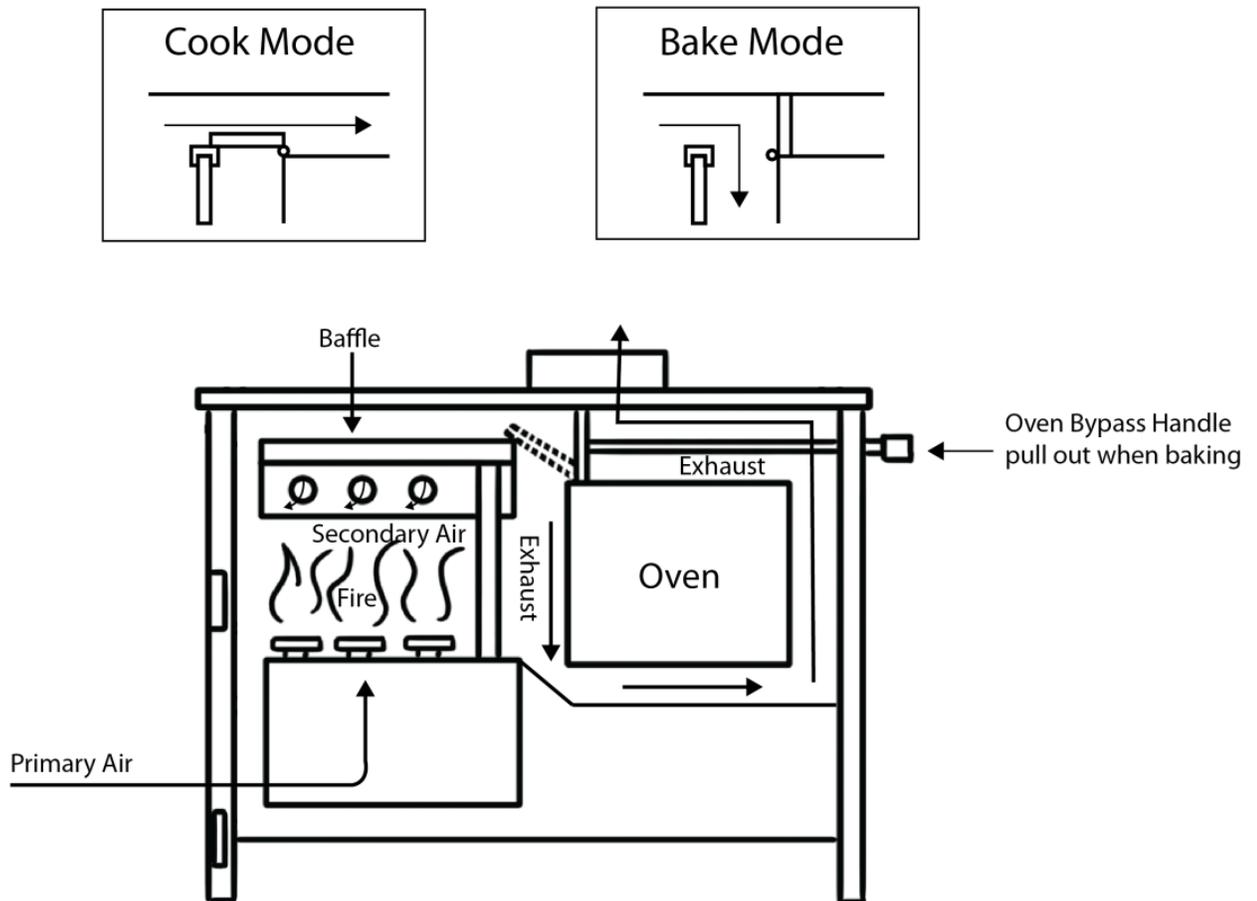
## OVEN BYPASS: BAKING & COOKING CONTROLS

The heco cookstove is designed to do both baking and stovetop cooking. However, there is an adjustment handle to set the stove as either *cooking mode* or *baking mode*. You can cook and bake at the same time in *bake mode*, but NOT in *cook mode*. Do not set in bake mode if you are not baking, as this will decrease the lifetime of your bake oven and require more frequent clean out.

In the diagram below, see how the handle on the right side of the stove is pulled OUT for baking, and pushed IN for cooking.

**Note:** When in baking mode - do not open firebox door, as this will cause smoke spillage!

### Oven Bypass



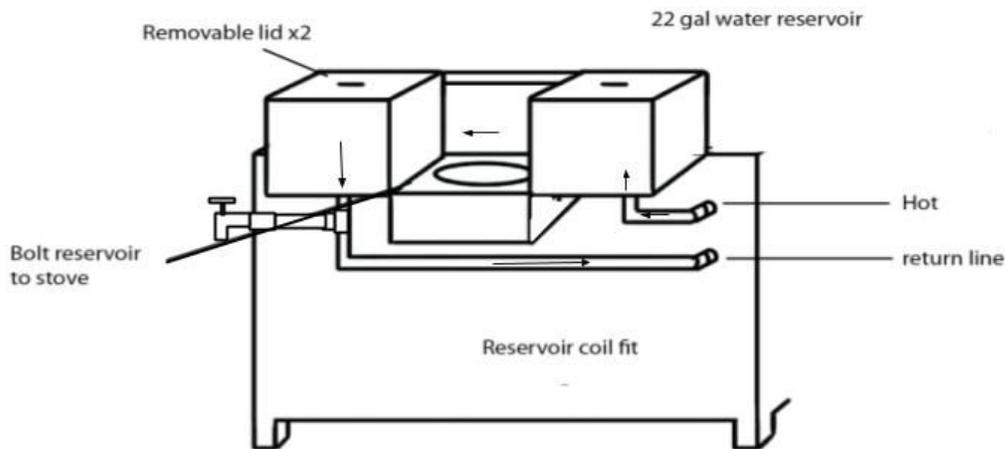
**Replacing baffle in fire box: let the fire go out and remove the left and center cooktop panels**

## DOMESTIC WATER OPTIONS

**Reservoir:** The 22 gallon reservoir is NOT a pressurized system but is manually filled. The 22 gallon reservoir tank fits on the back of the heco cookstove and fastens with a bolt. The water is dispensed through a faucet on the one side. Keep reservoir full of water at all times or it may boil. Never allow it to sit completely empty, which will void the reservoir warranty. If you would like to use the heco cookstove to supply all of your hot water needs, see below the reservoir coil kit option.

### 12" Reservoir Coil Kit Option:

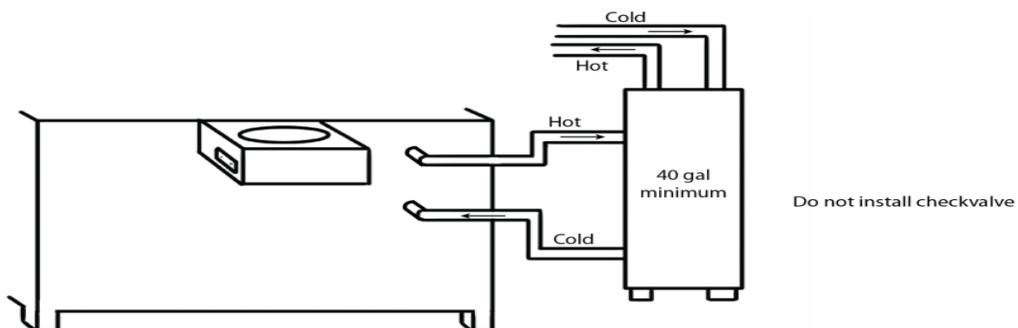
This coil kit allows your 22 gallon reservoir to heat up faster and stay consistently hot. This is only recommended to use with the 22 gallon reservoir, as the 12" coil kit cannot produce enough heat for an external tank. You will need this coil kit if you use your 22 gallon tank *frequently* throughout the day.



## DOMESTIC WATER OPTIONS

### External Tank Coil: ¾" X 23" Coil Only (Part Number: Heco 6-34C)

This coil is designed to be used in with an external tank that is separate from the cookstove. This tank should not be an existing water heater, but should be a holding tank that is separate from the existing gas or electric water heater that you currently have. This tank needs to be a minimum of 40 gallons, and MUST have a relief valve! Do not install a check valve in your cold water supply. The installation of this coil kit should be done by a professional trained plumber. **See detailed coil manual.** **Note:** all cookstoves are prepared to accept the coil option, allowing you to connect to an independent holding tank.



# Exhaust Cleanout

## How To Clean Out Your Heco Cookstove:

### 1. Front Below Bake Oven

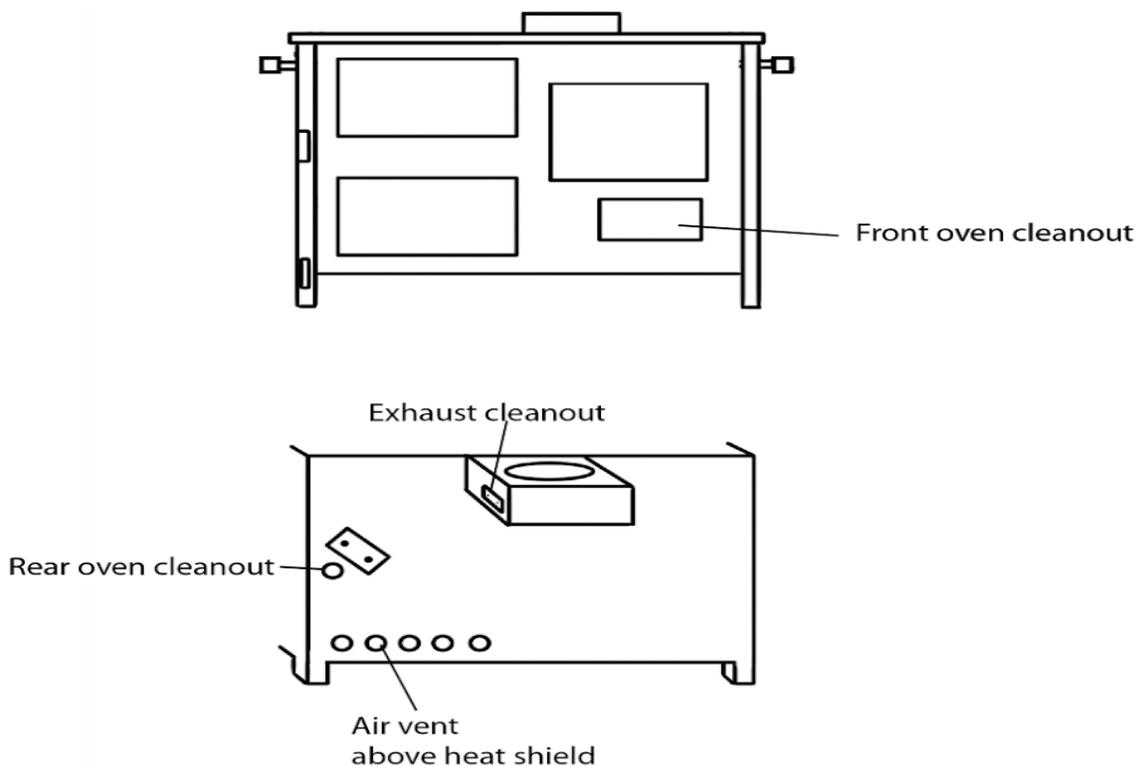
Below the oven on the front right side of the stove is a cleanout door. You need to remove the front panel. To remove, lift up and pull towards you. There is a smaller door inside with two wing nuts, remove these nuts and this small door. Use your small scraper (provided) to pull out any fly ash or debris that has accumulated.

### 2. Back between the body and bake oven

When facing the front, and you circle the stove on the right side to the back, there is a small cleanout door that swivels. Take your scraper and clean between the oven and the outside body.

### 3. Exhaust Box

This is found on the right side of the exhaust. This is used when cleaning a straight up chimney. There are two small wing nuts to remove, and then a small door comes off. Use your scraper to remove the ash.



**NOTE:** Remember to close ALL cleanout doors after cleaning. If left open they can affect the draft and result in smoke spillage.

## 420 Parts List

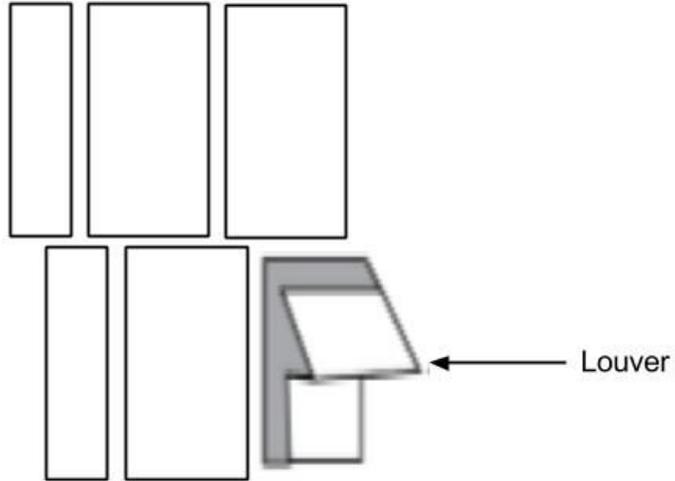
| Qty per stove | Description                                   | Part#    |
|---------------|---|----------|
| optional      | Firedoor with glass                           | 420-1    |
| optional      | Firedoor no glass                             | 0420-1-1 |
|               | ash door with handle                          | 420-5    |
|               | oven door with glass and handle               | 420-7    |
|               | oven door with no glass and handle            | 0420-7-1 |
|               | replacement oven (no porcelain parts)         | 420-14   |
|               | Airwash shuttle                               | 420-18   |
|               | Top border                                    | 420-19   |
|               | Front right leg                               | 420-22   |
|               | Front left leg                                | 420-23   |
|               | back left leg                                 | 420-24   |
|               | back right leg                                | 420-25   |
|               | left shelf side panel                         | 420-31L  |
|               | right shelf side panel                        | 420-31R  |
|               | shelf top                                     | 420-32   |
|               | Front top grid                                | 420-33   |
|               | Stove side panel (left and right the same)    | 420-34   |
|               | oven bypass holder / angle                    | 420-35   |
|               | shelf back                                    | 420-36   |
|               | oven top insert                               | 420-37   |
|               | rear cleanout cover                           | 420-38   |
|               | removable bypass baffle                       | 420-39-1 |
|               | front left filler                             | 420-40   |
|               | front right cleanout cover                    | 420-41   |
|               | center cover panel                            | 420-42   |
|               | left firebrick angle                          | 420-43   |
|               | rear standard heatsheild                      | 420-45   |
| optional      | rear exhaust heatsheild (optional)            | 420-46   |
|               | ash pan                                       | 420-47   |
|               | oven glass holder                             | 420-48   |
|               | oven door heatsheild (no glass)               | 420-50   |
|               | center or right side 1/4" cooktop (polished)  | 420-51   |
|               | center or right side 1/4" cooktop (porcelain) | 420-51P  |
|               | left side 1/4" cooktop (polished)             | 420-51L  |
|               | left side 1/4" cooktop (porcelain)            | 420-51LP |
|               | left top firebox heat deflector               | 420-52   |

| Qty per stove | Description  | Part#         |
|---------------|--|---------------|
|               | left oven insert   | 420-53L       |
|               | right oven insert  | 420-53R       |
|               | front oven cleanout door   | 420-55        |
|               | rear exhaust cleanout door   | 420-56        |
|               | firedoor/ashdoor handle  | 420-57        |
|               | shelf back splash  | 420-61        |
|               | firedoor glass holder  | 420-62        |
|               | coil cover plate   | 420-64        |
|               | C - Cast baffle  | 420-90        |
|               | oven insulation sheilds (2 per stove)  | 420-91        |
|               | fire door glass (9 1/2" x 11 3/4")   | 420-110       |
|               | oven door glass (12 1/2" x 17 3/4")  | 420-111       |
|               | oven door gasket (1/8" x 2 1/2" flat gasket x 70 1/2"                                  | GF011         |
|               | firedoor / ashdoor gasket replacement kit (9 ft 3/4" rd gasket - 1 tube gasket cement) | heco-GRK3/4-9 |
|               | 4" x 18 cast iron grates (2 per stove)   | 4X18-CIG      |
|               | 2 - grate rails (front)  | 24-GR-FRONT   |
|               | 2 - grate rails (back)   | 24-GR-BACK    |
|               | cast iron louvers (2 per stove)  | CI-FL         |
|               | Alum draft intake  | ALUM-DA       |
|               | Hot air regulator w/ 23" chain   | HOT-A-REG-23  |
|               | oven thermometer   | 50-550        |
|               | door handle/shaker (wood handle only)  | handle-B      |
|               | airwash/oven bypass (wood handle only)   | handle-D      |
|               | oven handle (wood only)  | handle-A      |
|               | oven stainless steel shelf   | OR-17.5 18    |
|               | wood plate   |               |
|               | right top firebrick c-channel  | 420-120       |
|               | right center firebrick c-channel   | 420-121       |
|               | oven bypass rod w/ wood handle and cotter pin  | 420-122       |
|               | oven bottom insert   | 420-91        |
|               | oven back insert   | 420-92        |

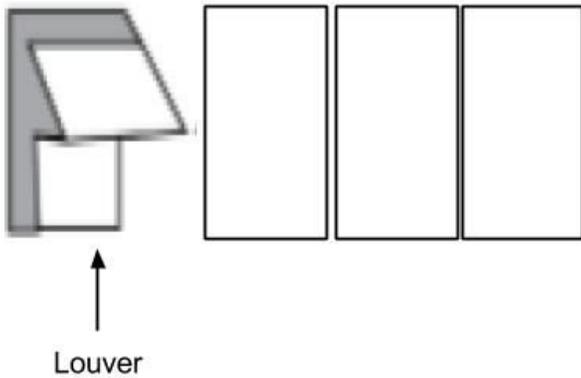
# 420 Firebrick List

## Firebrick Panels for Heco coostove 420

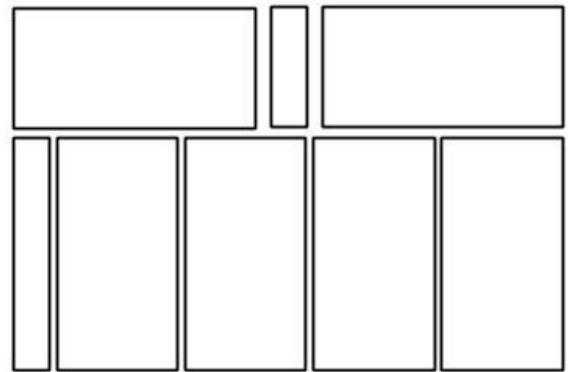
**Back Layout**



**Left Side Layout**



**Right Side Layout**



**Front Layout**



- Left Side Bottom: (3) 1 ¼" x 4 ½" x 9"  
 Right Side Top: (2) 1 ¼" x 4 ½" x 9"  
 (1) 1 ¼" x 4 ½" x 1"  
 Right Side Bottom: (4) 1 ¼" x 4 ½" x 9"  
 (1) 1 ¼" x 1 ⅝" x 9"

- Front: (3) 1 ¼" x 4 ½" x 5 ⅜"  
 (1) 1 ¼" x 3 ⅝" x 5 ⅜"  
 Back Top: (2) 1 ¼" x 4 ½" x 9"  
 (1) 1 ¼" x 2 ¾" x 9"  
 Back Bottom: (1) 1 ¼" x 4 ½" x 9"  
 (1) 1 ¼" x 2 ¾" x 9"

## 520 Parts List

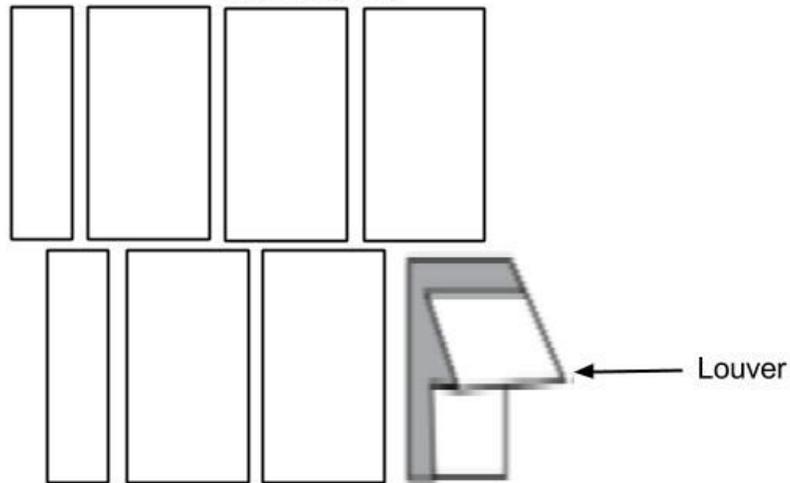
| Qty per stove | Description                                   | Part#    |
|---------------|---|----------|
| optional      | Firedoor with glass                           | 520-1    |
| optional      | Firedoor no glass                             | 0520-1-1 |
|               | ash door with handle                          | 520-5    |
|               | oven door with glass and handle               | 420-7    |
|               | oven door with no glass and handle            | 0420-7-1 |
|               | replacement oven (no porcelain parts)         | 420-14   |
|               | Airwash shuttle                               | 420-18   |
|               | Top border                                    | 520-19   |
|               | Front right leg                               | 420-22   |
|               | Front left leg                                | 420-23   |
|               | back left leg                                 | 420-24   |
|               | back right leg                                | 420-25   |
|               | left shelf side panel                         | 420-31L  |
|               | right shelf side panel                        | 420-31R  |
|               | shelf top                                     | 520-32   |
|               | Front top grid                                | 520-33   |
|               | Stove side panel (left and right the same)    | 420-34   |
|               | oven bypass holder / angle                    | 420-35   |
|               | shelf back                                    | 520-36   |
|               | oven top insert                               | 420-37   |
|               | rear cleanout cover                           | 420-38   |
|               | removable bypass baffle                       | 420-39-1 |
|               | front left filler                             | 520-40   |
|               | front right cleanout cover                    | 420-41   |
|               | center cover panel                            | 420-42   |
|               | left firebrick angle                          | 420-43   |
|               | rear standard heatsheild                      | 520-45   |
| optional      | rear exhaust heatsheild (optional)            | 420-46   |
|               | ash pan                                       | 520-47   |
|               | oven glass holder                             | 420-48   |
|               | oven door heatsheild (no glass)               | 420-50   |
|               | center or right side 1/4" cooktop (polished)  | 520-51   |
|               | center or right side 1/4" cooktop (porcelain) | 520-51P  |
|               | left side 1/4" cooktop (polished)             | 520-51L  |
|               | left side 1/4" cooktop (porcelain)            | 520-51LP |
|               | left top firebox heat deflector               | 520-52   |
|               | left oven insert                              | 420-53L  |
|               | right oven insert                             | 420-53R  |

| Qty per stove | Description  | Part#         |
|---------------|--|---------------|
|               | front oven cleanout door   | 420-55        |
|               | rear exhaust cleanout door   | 420-56        |
|               | firedoor/ashdoor handle  | 420-57        |
|               | shelf back splash  | 520-61        |
|               | firedoor glass holder  | 520-62        |
|               | coil cover plate   | 420-64        |
|               | C - Cast baffle  | 420-90        |
|               | oven insulation sheilds (2 per stove)  | 420-91        |
|               | fire door glass (9 1/2" x 11 3/4")   | 520-110       |
|               | oven door glass (12 1/2" x 17 3/4")  | 520-111       |
|               | oven door gasket (1/8" x 2 1/2" flat gasket x 70 1/2"                                  | GF011         |
|               | firedoor / ashdoor gasket replacement kit (9 ft 3/4" rd gasket - 1 tube gasket cement) | heco-GRK3/4-g |
|               | 4" x 18 cast iron grates (2 per stove)   | 4X18-CIG      |
|               | 2 - grate rails (front)  | 24-GR-FRONT   |
|               | 2 - grate rails (back)   | 24-GR-BACK    |
|               | cast iron louvers (2 per stove)  | CI-FL         |
|               | Alum draft intake  | ALUM-DA       |
|               | Hot air regulator w/ 23" chain   | HOT-A-REG-23  |
|               | oven thermometer   | 50-550        |
|               | door handle/shaker (wood handle only)  | handle-B      |
|               | airwash/oven bypass (wood handle only)   | handle-D      |
|               | oven handle (wood only)  | handle-A      |
|               | oven stainless steel shelf   | OR-175 18     |
|               | wood plate   |               |
|               | right top firebrick c-channel  | 420-120       |
|               | right center firebrick c-channel   | 420-121       |
|               | oven bypass rod w/ wood handle and cotter pin  | 420-122       |
|               | oven bottom insert   | 420-91        |
|               | oven back insert   | 420-92        |

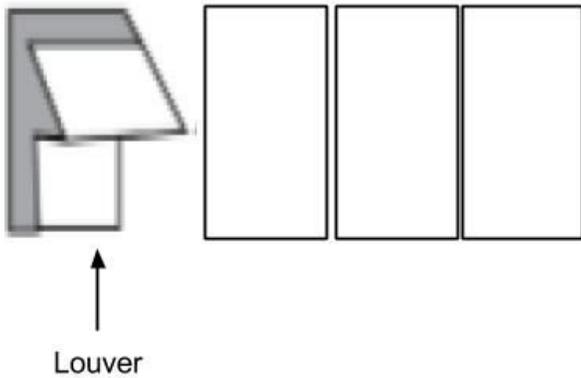
# 520 Firebrick List

## Firebrick Panels for Heco coostove 520

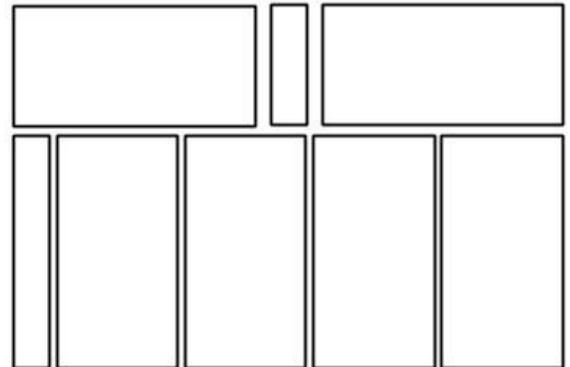
**Back Layout**



**Left Side Layout**



**Right Side Layout**



**Front Layout**



- Left Side Bottom: (3) 1 ¼" x 4 ½" x 9"  
 Right Side Top: (2) 1 ¼" x 4 ½" x 9"  
 (1) 1 ¼" x 4 ½" x 1"  
 Right Side Bottom: (4) 1 ¼" x 4 ½" x 9"  
 (1) 1 ¼" x 1 ⅝" x 9"

- Front: (3) 1 ¼" x 4 ½" x 5 ⅜"  
 (1) 1 ¼" x 3 ⅝" x 5 ⅜"  
 Back Top: (3) 1 ¼" x 4 ½" x 9"  
 (1) 1 ¼" x 2 ¾" x 9"  
 Back Bottom: (2) 1 ¼" x 4 ½" x 9"  
 (1) 1 ¼" x 2 ¾" x 9"

## TROUBLESHOOTING

| Symptom   | Problem   | Cause  | Solution   |
|---|---|--|--|
| Difficulty lighting or maintaining fire, excessive smoking and /or back puffing | Inadequate draft  | <ul style="list-style-type: none"> <li>- Closing oven bypass before chimney is heated</li> <li>- Obstruction inside chimney</li> <li>- Chimney too short</li> <li>- Cold chimney</li> <li>- Oversized chimney liner</li> <li>- stove is designed for 6" 420 and 7" 520</li> <li>- Negative pressure in house (caused by furnace, exhaust fans, dryer etc.).</li> </ul> | <ul style="list-style-type: none"> <li>- Keep damper open until fire is established</li> <li>- Inspect and clean chimney and stove pipe</li> <li>- Remove obstruction</li> <li>- Extend chimney</li> <li>-Install liner (flue liner should have same diameter as the flue collar of the stove)</li> <li>- Turn off cookstove and other exhaust factors when stove is burning</li> <li>- Crack a window to allow air into room</li> <li>-Increase chimney height to increase draft</li> </ul> |
| Smoking or back-puffing when cook plate or fire door is opened                  | Temporarily inadequate draft to pull smoke up chimney             | <ul style="list-style-type: none"> <li>- Oven damper is closed</li> <li>- Cold chimney</li> <li>- High winds</li> </ul>  | <ul style="list-style-type: none"> <li>- Open damper prior to opening door</li> <li>- Allow more time to warm up- Wait until wind dies down and install high wind cap</li> <li>- Check stove for cracks</li> </ul>   |
| Fire is difficult to control  | Excessive draft   | <ul style="list-style-type: none"> <li>- Too much draw on chimney</li> <li>- Door/glass gaskets loose or deteriorated</li> <li>- Ash pan door not closed</li> <li>- Excess air coming into stove</li> </ul>  | <ul style="list-style-type: none"> <li>- Install stovepipe damper in stove pipe</li> <li>- Adjust door hinges to tighten door seal</li> <li>Replace gasket if deteriorated</li> </ul>  |
| Wood is hard to light - sizzles and steams                                      | Wet / Damp wood   | <ul style="list-style-type: none"> <li>- Inadequate seasoning</li> <li>- Wood should be split</li> <li>- Moisture getting into stored wood</li> </ul>  | <ul style="list-style-type: none"> <li>- Allow wood to dry under cover for one year after splitting</li> <li>- Keep split wood covered (sides open)</li> <li>- Install liner to match stove flue size</li> <li>- Close oven damper</li> </ul>  |
| Oven won't heat adequately  | Inadequately draft low firebox temperature Heat not reaching oven | <ul style="list-style-type: none"> <li>- Oversized chimney or liner too large</li> <li>- Oven damper could be open</li> <li>- Wet wood</li> </ul>  | <ul style="list-style-type: none"> <li>- Allow wood to dry under cover for minimum of one year after splitting</li> <li>- Keep split wood covered (sides open)</li> <li>- Install liner to match stove flue size</li> <li>- Close oven damper</li> </ul>   |
| Inaccurate temperature readings   | Door thermometer not accurate                                     | <ul style="list-style-type: none"> <li>- Door thermometer does not always provide 100% accurate readings</li> </ul>  | <ul style="list-style-type: none"> <li>- Use interior oven thermometer</li> <li>- Call dealer for replacement</li> </ul>   |

## TROUBLESHOOTING

| Symptom                                     | Problem                        | Cause   | Solution  |
|---|--------------------------------|---|---|
| Foods in oven cooking unevenly              | Inconsistent oven temperatures | <ul style="list-style-type: none"> <li>- Fire not stabilized</li> <li>- Oven bypass is open, sending heat to the top of the oven and out the chimney</li> <li>- Location of oven rack</li> <li>- Dirty stove</li> </ul>           | <ul style="list-style-type: none"> <li>- Allow fire to stabilize (4-5" of red hot coals)</li> <li>- Recharge fuel as needed</li> <li>- Adjust oven racks</li> <li>- Rotate foods for more even results</li> <li>- Clean stove</li> </ul>                          |
| Cooking too slow                            | Cooking surface not hot enough | <ul style="list-style-type: none"> <li>- Fire not enough - Oven damper closed</li> <li>- Inadequate contact between cooking vessel and cooktop</li> <li>- Wet wood</li> <li>- Too large chunks of wood to create flame</li> </ul> | <ul style="list-style-type: none"> <li>- Add fuel and / or increase draft</li> <li>- Move cooking vessel to the left side of cooktop</li> <li>- Use flat bottomed cooking vessels</li> <li>- Use smaller splits of dry wood below 20% moisture content</li> </ul> |
| Stove rusting                               | Wet / cold conditions          | <ul style="list-style-type: none"> <li>- Condensation from temperature fluctuations</li> <li>- High humidity areas</li> <li>- Unheated structure</li> </ul>   | <ul style="list-style-type: none"> <li>- Prep stove for storage with food based grease</li> <li>- Run dehumidifier</li> <li>- Run heat on low when cookstove is not in use</li> </ul>   |
| Campfire Smell                              | Negative pressure              | <ul style="list-style-type: none"> <li>- Reverse flow in chimney</li> <li>- Moisture &amp; creosote combination</li> </ul>  | <ul style="list-style-type: none"> <li>- Remove negative pressure in home by cracking a window, or adding a fresh air inlet</li> <li>- Clean stove</li> </ul>   |
| Burn Time not long enough when burning wood | Burning to much wood           | <ul style="list-style-type: none"> <li>- Wet wood</li> <li>- Soft wood</li> <li>- Not enough ash buildup</li> <li>- Burning kindling</li> <li>- Burning too hot</li> </ul>  | <ul style="list-style-type: none"> <li>- Use seasoned hardwood (split, stacked and under cover for 1 - year</li> <li>- Allow 4 - 6" of ash buildup on grates</li> <li>- Burn at normal burn</li> </ul>  |

## **Heco Stoves 5 year Limited Warranty**

1. The warranty applies to the original purchaser of the stove ONLY. The warranty is non transferrable.
2. The body of the stove is covered for 5 years with labour and material
3. All cast Iron grates and louvers are covered for 5 years.
4. The door handles are covered for 5 year
5. The ash pan is covered for 1 year.

You must arrange to deliver or ship the stove or part to an authorized heco stove dealer at your own expense and arrange for pickup or delivery of the same after the repairs have been made. If, upon inspection, any damage is found to be the fault of the manufacturer, the repair or replacement will be made. This warranty does not include expenses incurred from travel time or loss of service. This warranty is not transferable and is extended only to, and is solely for the benefit of, the original retail purchaser of the stove. Please keep your dated sales receipt as proof of purchase.

### **Exclusions**

Ropes, gaskets, paint, porcelain coatings, firebricks and baffle will not be covered as they come under normal wear and tear. These would come under normal general maintenance. Damage due to incorrect installation and failure to comply with local authorities and failure to follow correct procedure.

### **NOTICE**

This warranty is void if installation or service is performed by someone other than a qualified installer, service agency or if installation is not in conformity with installation instructions or local fire and building regulations. All warranty claims must be submitted through the authorized heco Stoves dealer from whom the product was originally purchased.

Also the stove top should not exceed 800 degrees. All warranty will be void if surfaces reach above 600 degrees. You can purchase a stove top thermometer.

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