



70,000 & 90,000 Hand Fired Deep Box

Operating instructions and maintenance enclosed

Thoroughly read and understand instructions

Always leave this manual with stove owner

Follow the instructions within this manual. If instructions are not followed, a fire may result causing property damage, personal injury, or even death.

A carbon monoxide detector has been supplied with your stove. You must plug it in.

Danger risk of fire or explosion. Do not burn garbage, gasoline, drain oil, or other flammable liquids. Do not use chemicals or fluids to start fire.

Burn Nut and Pea anthracite coal only

Stoves surfaces may be hot while in operation. Keep children away. Do not touch during operation

Do not connect this unit to a chimney flue serving another appliance.

Follow all local building and Zoning ordinances

KEYSTOKER HAND FIRED 70,000 & 90,000 DEEP BOX STOVE INSTALLATION INSTRUCTIONS

Your Keystone Hand Fired Stove is designed for safe, efficient, and economical operation. It has been safety tested by Arnold Greene Testing Laboratory to ANSI UL 1482 standards. With proper use and maintenance, you will enjoy many years of low cost heating comfort.

Proper installation with clearances from combustibles to stove and stove pipe is critical for safety. Clearance 16" from stove pipe in rear and 12" clearances on sides. Clearances refer to the distance of empty space between stove and any material that will burn.

An approved protector or non-combustible pad must be placed under the stove if stove is installed on a combustible surface. The floor protector must extend 16" beyond front of stove and 8" beyond both sides and rear of stove. A carpet may not be left under floor protector.

Keep furniture, curtains, drapes, papers, and any other combustible at a safe distance from stove.

Contact your local building code officer about chimney inspection or any other ordinance restrictions.

The stove may be placed closer to a wall, if it is non-combustible or if wall is protected by a U.L. approved wall shield.

For your safety and protection all clearances as stamped on stove must be strictly adhered to.

Your stove has been carefully designed to burn coal. **DO NOT BURN** other fuels or trash.

Stove must be connected to a masonry chimney or an approved prefabricated metal chimney. If stove is to be connected to a chimney serving another appliance, check local building codes.

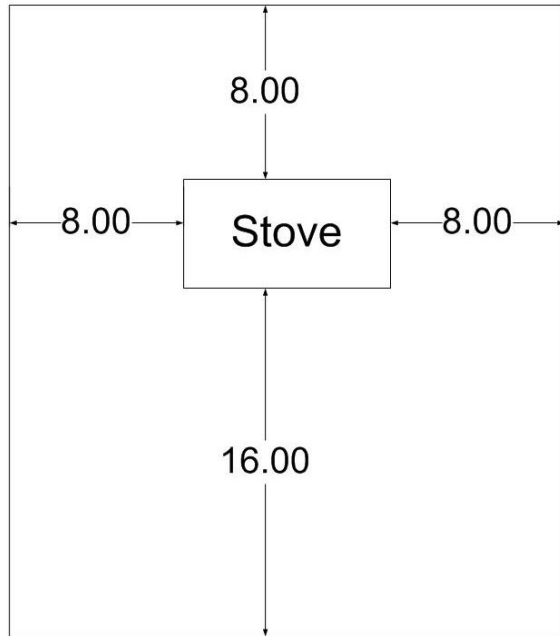
Stove should be placed as close to chimney as possible using as little pipe and elbows as practical.

After selecting a safe location for stove, if you have purchased the optional variable speed 265 CFM blower, connect blower to back of stove with screws

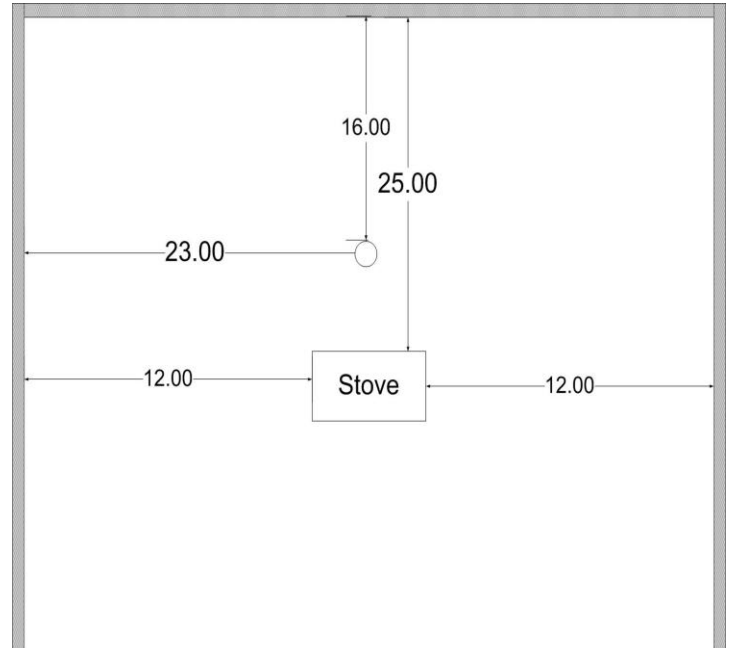
KEYSTOKER HAND FIRED 70,000 & 90,000 DEEP BOX STOVE INSTALLATION INSTRUCTIONS

provided. Be sure power cord does not touch any hot surfaces which could cause electrical fire. Rheostat on blower can be adjusted to increase or decrease fan speed, depending on amount of heat desired.

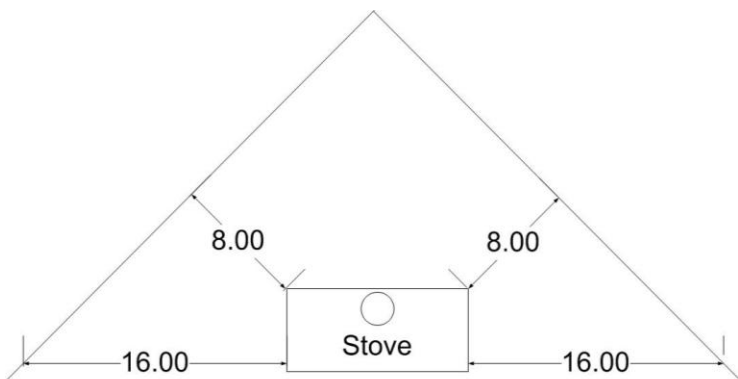
Approved Floor Protector Clearance



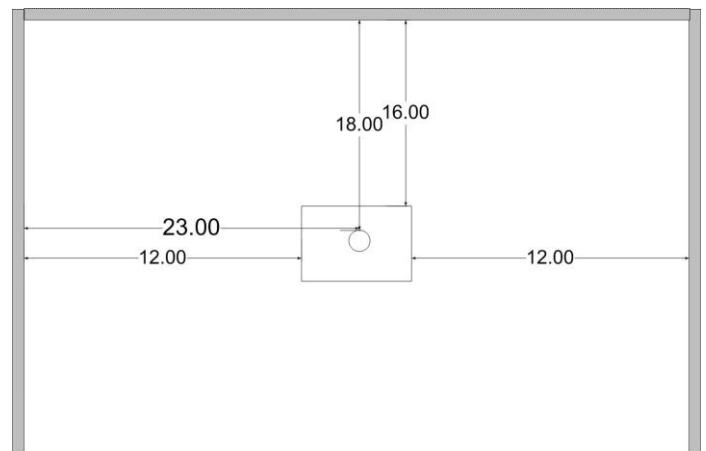
Rear Vent Clearance against Combustible Walls



Corner Clearance against Combustible Walls



Top Vent Clearance Against Combustible Walls



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Stove outlet and stove pipe is 6". Pipe to use 24 gauge blue or black steel. Install at least 9" from side wall and 18" from ceiling. Special methods are required when passing through a wall or ceiling. Check local building codes. All connections and joints should be secured using 3 screws in each joint. Horizontal runs of stove pipe should be on a slight upward grade from stove to chimney thimble. Stove pipe may not enter chimney beyond inside wall of chimney. This will adversely affect draft. Either/both a barometric or manual damper should be installed in stove pipe.

The manual air control slide knob is located on ash door. Sliding knob to the left will increase opening in ash door, allowing more flow of combustion air through fire. This will increase burn rate of coal and produce higher heat output. Sliding knob right will close combustion air and reduce heat output of stove and increase burn time of stove.

If your stove is equipped with an automatic heat regulator dial on back of stove, it will not be necessary to adjust burn rate of coal by using slide on ash door.

To attain desired heat output of stove, place selector dial to a number from 1 to 5. This will open combustion shutter on bottom of stove to allow more air flow through fire bed for a faster burn rate. When stove temperature rises, to setting on selector dial, combustion shutter will close until stove cools enough to allow combustion shutter to reopen.

NOTE: Hot coals may not be allowed to burn above stove fire brick. Fire brick is designed to contain fire. Hot coals above fire brick may cause permanent damage to stove. When fire bed becomes too high, it is time to shake down ashes into ash pan. The fire may be raked until hot coals begin to fall through grates. Stop shaking when hot coals fall into ash pan, hot coals burning on grate will cause overheating of grates and reduce life of grates. Leaving a thin layer of ash on grates will protect grates and extend life of grates.

Do not allow ash pan to become overfull. This will reduce air flow through fire and cause poor burning of coal. Do not allow ash accumulation closer than 2" below shaker grate. Burning coal may stay hot for hours. Always wear gloves when removing ash pan. Ashes should always be removed before shaking grates.

Opening ash door to burn coal faster can cause overheating of stove and void warranty. If stove or stove pipe glows red, stove is being over fired. Close all

KEYSTOKER HAND FIRED 70,000 & 90,000 DEEP BOX STOVE INSTALLATION INSTRUCTIONS

combustible air intakes in ash door or heat regulator dial and allow stove to cool down.

DURING NORMAL OPERATION, FIRE AND ASH DOORS MUST REMAIN CLOSED.

Annual cleaning and maintenance should be done annually at the end of the heating season. Brush interior sides and top of stove, remove baffle, if desired, and brush off. Remove stove pipe and vacuum. Clean base of chimney and then insect chimney. Examine stove pipe. If your stove is equipped with a blower, oil motor at both ends as indicated on motor with #20 non-detergent motor oil. Clean fan blades and screen.

When allowing fire to go out at the end of heating season, place a few drops of oil on door hinges and door latches to prevent rust from building up and causing failure of free movement next fall.

The following instructions are meant to serve as a guideline for proper cleaning and care of ROBAX glass-ceramic windows.

CLEANING TECHNIQUES:

All cleaning procedures should be performed at room temperature. Cleaning of hot surfaces should be avoided. The main reason is that cleaning solutions may dry rapidly before thorough removal which may result in creating a film or deposit that can react with combustion by-products.

If white deposits are found to be on the surface of glass, these should be scrapped off using a sharp bladed scraper and then wiped away with a dry cloth prior to any wet cleaning. Scraping should be done at a low angle below 30 degrees.

Although glass is extremely hard and is very scratch resistant, it is not scratch-proof. The use of an abrasive cleaner (i.e. any cleaners containing grit) and scouring pads (i.e. steel wool, plastic with embedded grit) should be strictly avoided.

Soft cloths should be used for all cleaning steps. These cloths should be free of any abrasive agents. The use of sponges should be avoided as they have a tendency to retain abrasive agents from prior uses.

KEYSTOKER HAND FIRED 70,000 & 90,000 DEEP BOX STOVE INSTALLATION INSTRUCTIONS

When cleaning, it is not advisable to allow cleaners to dry on glass surface. Dried on cleaning solutions may react with surface which will cause a discoloration or permanent film.

TIPS ON STARTING A HAND-FIRED ANTHRACITE STOVE

Take about eight sheets of newspaper crumble into a ball and place on top of grates. Next, lay fine kindling on top of the newspaper. This kindling must be dry and no larger than $\frac{3}{4}$ " in diameter. Layer the kindling in a crisscross fashion to allow good air flow. Open the draft control fully and light the newspaper just inside the door. Next, close the loading door and allow the kindling to catch fire. After a few minutes, open the loading door an inch or two for a few seconds before opening completely. This method will allow smoke to clear away from the door opening before the loading door is completely opened.

Add small, compact pieces of hardwood when the kindling is burning hot. Keep the draft controls fully open to establish a hot fire quickly. The ash door also may be opened during start-up to accelerate the initial burn.

When a substantial bed of red wood coals is built up, start adding coal (Pea or Nut coal is preferred when starting) small amounts at a time. Keep the draft control open.

Continue adding small amounts of coal until there is a solid bed of burning coal. DO NOT add too much at one time. Allow sufficient time between each small loading (at least 5-10 minutes), so that each loading has time to ignite thoroughly before the next load is put in. When a substantial bed of burning coals has been established, fill the stove to the top of the firebrick. A deep bed of coal always will burn more satisfactory than a shallow bed.

When most of the wood is burned and coal is completely ignited (usually 5-10 minutes or less after filling stove), the draft controls should be turned down to the proper operating level. (If the ash door has been opened, it must be closed to prevent over firing, which can cause dangerously high temperatures).

KEYSTOKER HAND FIRED 70,000 & 90,000 DEEP BOX STOVE INSTALLATION INSTRUCTIONS

OPERATION OF HAND-FIRED ANTHRACITE STOVES

LOADING

Coal should never be added unless there is a reasonable, hot fire. The coal bed should be bright and vigorous.

If the fire is burning hot and there is a deep bed of coals, full loads of coal can be added at any time. However, if there is not a deep bed of coal, it is best to add small amounts of coal at first.

INCREASING HEAT FROM LOW FIRE

Every effort should be made not to let a coal fire burn too long so that the fire has started to die. This will cause the reloading process to be much longer, and there is a good possibility of losing the fire.

Do not shake or stir a low fire.

Open the draft control wide open or open the ash cleanout door to get maximum draft.

Run the stove with the draft control or ash door fully open until the fire is reasonably hot.

Start adding small amounts of coal. When the new stove is thoroughly ignited or there is a substantial bed of hot coals. The stove may be shaken thoroughly. Be sure to shake down all ashes, but do not over shake.

INCREASING HEAT FROM LOW FIRE

After shaking, keep the bottom draft control open until you are sure the fire is continuing to burn hot, and then turn the draft control down to the proper operating level. **IF THE ASH DOOR HAS BEEN OPENED, BE SURE TO SHUT IT (SERIOUS DAMAGE CAN RESULT IF THE STOVE RUNS FOR EXTENDED PERIODS WITH ASH DOOR OPEN).**

KEYSTOKER HAND FIRED 70,000 & 90,000 DEEP BOX STOVE INSTALLATION INSTRUCTIONS

For stoves with the screw type draft control, count the exact number of turns from full shut to normal operating position so that you can adjust the stove to the exact level of heat output and length of burn you desire.

SHAKING

Shaking should be done only when the stove is a hot fire. The frequency of shaking will depend on the type of stove and the degree of burning. Shaking should be done at least once a day, but factory recommends twice a day. Best results from shaking with most grates will occur if short, “choppy” strokes are used rather than long, even strokes. The amount of shaking is critical. Too little or too much, can result on the extinguishing of fire due to air flow, the proper amount normally occurs when red coals first start to drop through onto the bed of ashes.

DRAFT CONTROLS

The heat output of the coal is controlled by the primary draft control, usually found on the bottom door. Experience will dictate the proper settings for heat output.

Coal responds very slowly to changes in the draft settings. Due to this slow response time, overcorrecting is a common problem. When changes in heat output are needed, make only small changes in the draft setting and wait for the temperature to stabilize.

ASHES

Ashes should never be allowed to accumulate in the ash pit, so that they in any way impede the flow of combustion air into fire. Excessive ash accumulation can cause severe damage to the grates due to the absence of a cooling flow of air beneath them.

Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible floor or the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial into the soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have been thoroughly cooled outside of the dwelling.

KEYSTOKER HAND FIRED 70,000 & 90,000 DEEP BOX STOVE INSTALLATION INSTRUCTIONS

CAUTION! ASHES SHOULD NEVER BE ALLOWED TO ACCUMULATE ABOVE TOP OF THE ASH PAN. ASHES IN CONTACT WITH THE BOTTOM OF THE GRATES CAN ACT AS AN INSULATOR, INTENSIFYING THE HEAT ON THE GRATES, AND COULD CAUSE THEIR WARPAGE. WITH AN EXCESSIVE ASH BUILDUP, PRIMARY COMBUSTION AIR IS RESTRICTED, THUS, THE UNIT'S OUTPUT COULD BE REDUCED.

GRATES WARPED IN THIS WAY ARE EASILY RECOGNIZED BY THE EXTREME DAMAGE CAUSED TO THE GRATES.

SAFETY

Whenever a loading door is opened, it should always be cracked slightly to allow oxygen to enter and burn any combustion gases that are present, before fully opening. Failure to do this could result in sudden ignition of the unburned gases when the door is opened. A stove should never be filled with excessive coal, so that the flue gas exit is blocked or impeded in any way. Burning coal generates Carbon Monoxide. If the flue gas exit is blocked, the Carbon Monoxide can be forced out of the stove into the room, with possible fatal consequences. With the exception of the start-up period, the ash pit door should never be left open. Also **NOTE** that a stove should never be left unattended with the ash pit door open.

SERIOUS DAMAGE TO THE STOVE CAN OCCUR FROM OVERHEATING.

Coal stoves should not be installed in any chimney that had a history of back-drafting or flow reversal. These conditions can cause improper draft, resulting in Carbon Monoxide entering the dwelling rather than being drawn up the chimney.

REMEMBER! Coal, like all fossil fuel, contains gases that are toxic!

U.S. ENVIRONMENTAL PROTECTION AGENCY

COAL-ONLY HEATER

This heater is only for burning coal. Use of any other solid fuel except coal ignition purposes is a violation of Federal law.

THIS HEATER COMPLIES WITH FEDERAL
REGULATION 40 CFR 60.

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Keystone Manufacturing company extends the following warranties to the original owner from the date of purchase.

Five Years Workmanship on stove body

Two years on grates and side rails

One year all electric controls and motors.

Warranty does not apply if damage occurs because of improper handling, operation, abuse, rust, corrosion, misuse or use beyond rated capacity.

This warranty does not apply if the product has been altered in any way after leaving the factory.

All warranty claims should be made through dealer where the appliance was originally purchased. Model, and original copy of the sales receipt need be presented to dealer.

If a consumer chooses to make a warranty claim directly through Keystone Manufacturing Company model, and copy of the original sales receipt are required. Customer must provide a credit card which will be charged for the full retail price for the product plus shipping and handling. When defective part is returned to the company and found to be a defect within warranty period the consumer's credit card will be credited back the cost of part.

Keystone Manufacturing Company assumes no responsibility for any labor expenses, for service, product removal, reinstallation or any freight charges for parts returned to the company.

If defective in material or workmanship and if removed by the owner within warranty period Keystone manufacturing will at their opinion repair or replace the product.

This warranty is limited to defective parts, repair, or replacement at our opinion and excludes any incidental and consequential damages connected there with.

Warranty exclusions, labor, door gasket, ash tub, and paint

Stove Information

Dealer_____

Date of purchase_____

Stove Model_____