

OWNER'S MANUAL

MXTM 2 CONTROL EQUIPPED WOOD PELLET BURNING HEATER

- * INSTALLATION * OPERATION *
- * SERVICE * PARTS *

Model 100 Free Standing & Insert

BayWin Free Standing & Insert

KSH 120







A WARNING



HOT SURFACES! Glass and other surfaces are hot during operation and cool down.

Hot glass will cause burns.

- Do not touch glass until it is cooled.
- · NEVER allow children to touch glass.
- Keep children away.
- CAREFULLY SUPERVISE children in same room as fireplace.
- Alert children and adults to hazards of high temperatures.
- High temperatures may ignite clothing or other flammable materials.
- Keep clothing, furniture, draperies and other flammable materials away.

U.S. ENVIRONMENTAL PROTECTION AGENCY Certified to comply with 2020 particulate emission standards using pellet fuel.

Manufactured By: APR Industries Ltd.

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Em: mail@kozistoves.com

CAUTION:

Read all instructions carefully before starting the installation or operating the heater. Failure to follow these instructions could result in property damage, bodily injury or even death. Contact local building or fire officials about restrictions and installation inspection requirements in your area. Save this manual for future reference.



Intertek

Printed in Canada April 2015 If you have any questions, comments or concerns regarding your new **KOZY** pellet stove, please contact your local dealer or APR Industries Ltd. at **WWW.KOZISTOVES.COM** or (204) 452-9907.

CAUTION: Stove has moving parts. Disconnect power before servicing.

Please contact your local building officials (i.e. municipal, building department, fire department, fire prevention bureau, etc.) to determine the need to obtain a permit.

This wood heater needs periodic inspection and repair for proper operation. It is against federal regulations to operate this wood heater in a manner inconsistent with operating instructions in this manual.

The stoves have been found to be in compliance with the following standards:

ULC S628 (1993), ASTM E1509 (2004), ULC S627 (2000), UL 1482 (2011), ULC/ORD C1482 (1990), ASTM E2779 (2010), and ASTM E2515 (2011).

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I. SAFETY FIRST

This heater is suitable for both mobile home and conventional home installation. Read all instructions carefully before starting installation. Save this manual for future reference.

- 1. Read these instructions carefully. Failure to follow them could cause a malfunction of the heater, damage to the heater, properly damage, bodily injury or even death.
- 2. Familiarize yourself with the heater's operation (See "Operation" section). If you are not sure, ask your dealer for explanations on your heater's proper operation.
- 3. The burn pot of this heater is designed for premium grade wood pellets. Pellets with too much fines and saw dust must be screened before use. **DO NOT USE WET PELLETS**. Refer to the "Fuel Requirements" section for more information.
- 4. Oil the circulation fan motor bearings every 6 months. See "Maintenance" section for more details.
- Check your local building codes regarding restrictions or installation requirements. All installations must comply with local building codes.
- 6. This heater requires a floor protector beneath the heater and extending a minimum of 6 inches (150 mm) in the front and beyond each side of the fuel loading and ash removal openings of the heater. This is to catch any spillage, which may occur during opening and closing of the doors. See Figure 1 for more information.
- 7. Use only UL/ULC listed type PL or L venting for the exhaust system. This heater is designed for use with 3 inch (76 mm) vent pipe. Avoid long runs and too many bends. It may be necessary to increase the size of the vent pipe to 4 inch (102 mm) if long runs and too many bends are unavoidable. See "Venting System" section for more information.
- 8. Combustion of wood pellet fuel leaves ash in the heater and venting system. These ashes must be removed from the heater and venting regularly (approximately once a week or more frequently for high ash content fuels). See "Maintenance" section for more information. The entire system must also be cleaned at the start of each heating season. A yearly inspection of the venting is highly recommended.
- 9. The heater must be turned off and allowed to cool before cleaning. Make sure there are no hot ashes or embers present. Use a brush and scoop to clean. Only use vacuum cleaners specifically designed for use with hot ashes. Place all ashes in a sealed metal

- container with tight fitting lid.
- 10. Store all pellet fuel at a safe distance (at least 36 inches/1 meter) away from the heater and in a sealed metal container. DO NOT place the fuel within the installation clearances of the stove or within the space needed for ash removal and start up.
- 11. This heater is POWER VENTED (the vent pipes have positive pressure during operation). It is IMPERATIVE that all joints in the venting system be <u>SEALED</u> to prevent any leakage of exhaust gases inside the house. All joints must be sealed using high temperature silicone (RTV). Aluminum tape is not an adequate sealant
- 12. Use of outside combustion air is highly recommended and is mandatory in mobile home installations. Connect the air intake of the heater to the exterior of the building with a noncombustible metal pipe with a minimum diameter of 2 inches (50 mm) (use APR Part No. AK 100). Use of plastic pipe is NOT permitted.
- 13. This appliance is wired and grounded according to the CSA C22.1 code for Canada and the NFPA 70 code for the USA. Also, this heater meets the fuel burning appliance installation codes NFPA 211 in the USA and CSA B365 in Canada.
- 14. DO NOT operate the heater with the door open. Make sure the door and any other opening in the stove are closed tightly during operation. Inspect the gaskets of the door and other openings periodically to make sure they are in good condition.
- 15. Replace broken or defective only with parts provided by the manufacturer. Visit **WWW.KOZISTOVES.COM** or contact your local dealer to find out how to purchase replacement parts.
- 16. Follow this manual carefully for proper installation. If you are uncertain, call your dealer. Most dealers have qualified and trained installations. We highly recommend the use of their services.
- 17. Your KOZI stove should be installed, operated and maintained regularly in accordance with this manual. Failure to follow this manual may cause smoke spillage or other potential hazards. Install a smoke and carbon monoxide detector on every floor of your home. Install these detectors near sleeping areas and near the stove. Follow all manufacturers' instructions when operating the smoke and carbon monoxide detectors. Maintain these detectors as stated by the manufacturer.

II. STOVE SPECIFICATIONS

Model 100 Free Standing				
*Burn Rate	1.0 - 4.5 lbs/hr			
Particulate Emissions	0.61 g/hr			
CO Emissions	1.38 g/hr			
**Overall Efficiency	78.6%			
*Heating Capacity	500 to 2000 sq. ft.			
Hopper Capacity (approx.)	50 lbs			
*Heat Output Range	8,000 - 30,000 BTU/hr			

Model 100 Insert				
*Burn Rate	1.0 - 4.5 lbs/hr			
Particulate Emissions	0.61 g/hr			
CO Emissions	1.38 g/hr			
**Overall Efficiency	78.6%			
*Heating Capacity	500 to 2000 sq. ft.			
Hopper Capacity (approx.)	40 lbs			
*Heat Output Range	8,000 - 30,000 BTU/hr			

KSH 120				
*Burn Rate	1.0 - 4.5 lbs/hr			
Particulate Emissions	0.61 g/hr			
CO Emissions	1.38 g/hr			
**Overall Efficiency	78.6%			
*Heating Capacity	500 to 2000 sq. ft.			
Hopper Capacity (approx.)	120 lbs			
*Heat Output Range	8,000 - 30,000 BTU/hr			

BayWin Free Standing				
*Burn Rate	1.0 - 4.5 lbs/hr			
Particulate Emissions	0.56 g/hr			
CO Emissions	2.27 g/hr			
**Overall Efficiency	78.2%			
*Heating Capacity	500 to 2000 sq. ft.			
Hopper Capacity (approx.)	50 lbs			
*Heat Output Range	7,000 - 28,000 BTU/hr			

BayWin Insert				
*Burn Rate	1.0 - 4.5 lbs/hr			
Particulate Emissions	0.56 g/hr			
CO Emissions	2.27 g/hr			
**Overall Efficiency	78.2%			
*Heating Capacity	500 to 2000 sq. ft.			
Hopper Capacity (approx.)	40 lbs			
*Heat Output Range	7,000 - 28,000 BTU/hr			

^{*} Values will vary depending on the quality of pellet fuel being used.

^{**} The Higher Heating Value (HHV) is used to determine the overall efficiency in accordance with CSA B415.1-09. The HHV is the total amount of heat in a sample of fuel (including the energy in the water vapor that is created during the combustion process). The Lower Heating Value (LHV) is the amount of heat in a sample of fuel minus the energy in the combustion water vapor. Using the HHV will give us a more accurate efficiency rating.

III. INSTALLATION

1. Clearance To Combustibles

i. Installation Clearances

Please refer to the following figures for all clearances to combustibles. Please note that these clearances are for your **KOZY** heater only. Each venting manufacturer/supplier has their individual clearances which must also be respected.

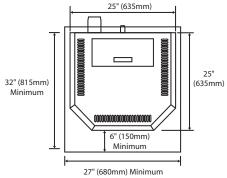


FIGURE 1. **KOZY** BayWin noncombustible floor protector (same dimensions apply to Model 100 and KSH Series).

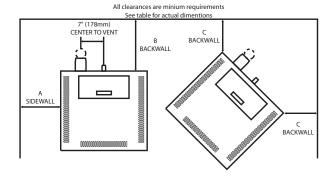


Figure 2. Sidewall Clearances

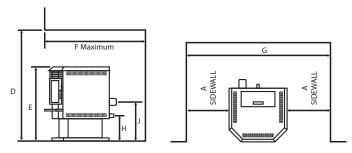
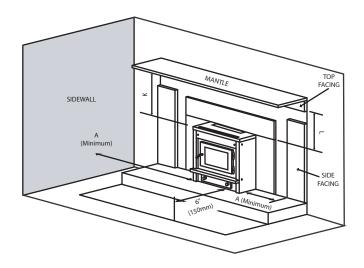


Figure 3. Alcove Clearances.



INSTALLATION COMMENT: We recommend sufficient space be provided (minimum 20 inches/500 mm) on each side of the heater to service the equipment area. If this is not possible, a provision must be made to pull the heater out for service.

All dimensions are minimum dimensions unless marked.						
Dimension	Description	BayWin Model 100 KSH Series		BayWin Insert	Model 100 Insert	
Α	Unit to side wall or side facing	12" (300 mm)	5"	(125 mm)	12" (300 mm)	5" (125 mm)
В	Unit to back wall	1" (25 mm)		N/A		
С	Corner of unit to wall	1" (25 mm)			N/A	
D	Alcove height	48" (1220 mm)		38" (965 mm)		
Е	Overall unit height	30.5" (775 mm) 30.5" (775 mm)*		21.25" (540 mm)		
F	Alcove depth (Maximum)	30" (760 mm)				
G	Alcove width	48" (1220 mm) 34" (865 mm)		48" (1220 mm)		
Н	Floor to centerline air intake	11" (280 mm) 3" (75 mm)		1.5" (38 mm)		
J	Floor to centerline exhaust	18" (458 mm)		10" (255 mm)	8.5" (215 mm)	
K	Unit to mantle	N/A		13" (330 mm)		
L	Unit to top facing	N/A		N/A 13" (330 mm)		0 mm)

TABLE 1. Clearance Dimensions.

Additional installation information can be found in the "Typical Installation Configurations" section and your venting manufacturer/supplier's literature.

INSTALL VENT AT CLEARANCES SPECIFIED BY THE VENT MANUFACTURER

ii. Other Clearances and Recommendations

- a. This heater must be mounted on a noncombustible material, placed underneath the heater and extending a minimum of 6 inches (150 mm) in front and beyond each side of the fuel loading and ash removal openings of the heater.
- b. Clearances can only be reduced by means approved by local building or fire officials in your area.
- c. A safety certification label has been attached to either the back of the heater or on top of the hopper (for insert models). A sample label is shown here to help you locate this label on your heater. Please read all information on your heater's label. All information on the certification label supersedes any information contained in this manual.

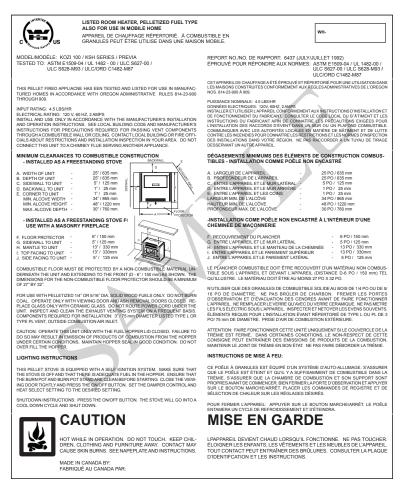


Figure 5. Certification Label.

2. Electrical Requirements

- a. This heater is an electrical appliance. The North American versions of this appliance require 120 Volts, 60 Cycles and 3 Amps of electrical power. The European versions of this appliance require 230 Volts, 50 Cycles and 2 Amps of electrical power. All heaters with an electric igniter require an additional 300 Watts of electrical power during the start up sequence.
- b. The heater comes with a 5 ft. (1.5 M) long, grounded electrical cord suitable to plug into any standard residential electrical outlet. The electrical outlet must be grounded.
- c. When installed in a mobile home, the heater must be grounded to the steel chassis of the home (unless this is not required by local code).

3. Fuel Requirements

i. <u>Physical Properties</u>

Your heater is very sensitive to fuel quality. Every effort should be made to use only the best pellet fuel available in your area. This heater is designed for premium grade, 1/4 inch (6.35 mm) or 5/16 inch (7.94 mm) diameter wood pellets only. The following should assist you in selecting and using proper fuel.

Good Fuel Bad Fuel Made from hard or soft wood Moist or wet Lots of fines or sawdust Dry Clean Longer that 1" 1/4" or 5/16" in diameter Contains binders (helps glue the fuel together) 1" or less in length Low ash content (less than 1%) High ash content (greater than 1%) Not made of wood

Burning any fuel other than wood pellets as described above will void your heater's warranty and may void any insurance.

If you find your fuel has too much fines and saw dust, the fuel may be screened before use. DO NOT USE WET PELLETS under any circumstances. Longer fuel may cause bridging of the auger and may result in erratic feeding or jamming. Fines, binders, ash, moisture will all cause your heater to plug up and not burn efficiently. "Poor" fuels require more frequent cleaning; the ash tray must be emptied and the burn pot must be cleaned on a weekly or possibly daily basis. Please refer to the "Maintenance" section for further instructions on cleaning your heater.

This heater is designed to burn premium grade wood pellets. Higher efficiencies and lower emissions will generally result when burning premium grade wood pellets as compared to fuels with higher ash and moisture contents.

ii. Fuel Storage

All pellet fuel should be stored in a clean, dry place and at a safe distance (at least 36 inches/1 meter) away from the heater. DO NOT place fuel within the installation clearances of the heater or within the space needed for ash removal or starting of the heater.

WARNING: Do not burn:

- Garbage
- · Lawn clippings or yard waste
- Materials containing rubber, including tires
- Materials containing plastic
- Waste petroleum products, paints or paint thinners or asphalt products
- Materials containing asbestos
- Construction or demolition debris
- · Railroad ties or pressure-treated wood
- Manure or animal remains
- Paper products, cardboard, plywood or particleboard

Burning these materials may result in release of toxic fumes or render the heater ineffective and cause smoke.

4. Location Of The Heater

Before proceeding with the installation, the following sections should be reviewed:

Section 4: Location Of The Heater

Section 5: Typical Installation Configurations

Section 6: Venting System

When selecting a location for your new heater consider the following:

a. Clearance to combustibles.

e. Power within 5 ft (1.5 m)

b. Sufficient room to service the unit. f. Access for exhaust venting.

c. Access for outside combustion air. g. EVL not exceeding 25 ft (7.6 m).

d. NOT approved for bedroom

See "Exhaust Vent Requirements" section.

Locate your stove in the main living space where the majority of the heat is needed to get the best efficiency out of your stove. For example, installing a

stove in a basement when the heat is needed on the main floor is not the best location for your stove. The heat being produced in the basement may rise to the upper floors, but is usually to slow and provides limited comfort on the upper floors. In order to keep the upper floors heated comfortably, the basement would be overheated, thus more pellet fuel is used, reducing the efficiency of the stove. Locate the stove in an open area that has very little restrictions on air movement (i.e. not near walls, doors, etc.). Installing the stove in a confined space will reduce the amount of heat in other areas and will reduce your stove's efficiency. This stove is designed for indoor use only. Installing the stove outdoors will reduce the efficiency of the stove significantly, increase fuel consumption and will make it difficult to heat the desired area comfortably.

5. Typical Installation Configurations

The following figures describe some typical installations. Variations of these are possible. Common sense, safety and compliance with local codes must be respected in any variation.

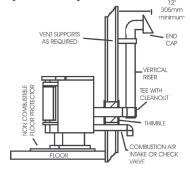


Figure 6. Free standing through the wall and up installation.

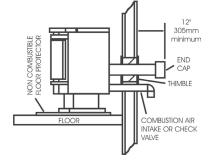


Figure 7. Free standing through the wall installation.

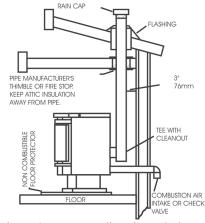


Figure 8. Free standing through the roof installation.

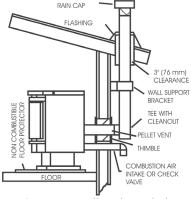
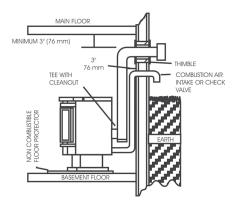


Figure 9. Free standing through the wall and the roof installation.



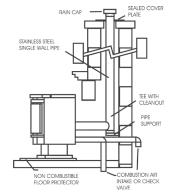


Figure 10. Free standing basement installation.

Figure 11. Free standing through a masonry chimney installation.

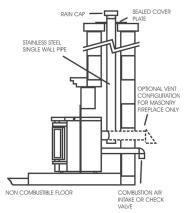


Figure 12. Factory built zero clearance or masonry fireplace insert installation.

Wood smoke contains gases and tiny particles that when inhaled or breathed can have serious health effects. In the cold, stagnant air prevents the wood smoke from rising and can create unhealthy air quality or can become a nuisance for neighbors. This smoke can seep into surrounding homes even with doors and windows fully closed. Please locate your heater and install the venting with this in mind.

6. <u>Venting System</u>

i. Exhaust Venting Pipe Requirements

Your **KOZY** pellet heater works under negative pressure (vacuum). The exhaust fan of your stove pulls air from the air intake, through the stove and pushes it out the venting. As this air passes through the burn pot it is used to burn the pellets. Proper vent pipe sizing is very important to the proper

operation of your stove. A proper size ULC/UL listed type PL or L venting should be used to provide the least resistance for movement of the combustion air

Your **KOZY** pellet heater is certified for 3 and 4 inch exhaust venting. 3 inch venting is normally sufficient for most direct vent installations. Installations with several elbows, long horizontal and/or vertical runs may add too much resistance to air flow and may create burn problems. The use of 4 inch venting in these types of installations will reduce the possibility of burn problems. A simple technique called "EQUIVALENT VENT LENGTH" (EVL) can be used to determine whether 3 or 4 inch vent pipe should be used.

To calculate EVL use the following formula:

for each 90° elbow or T-fitting = add 5 EVL for each 45° elbow = add 3 EVL

for each horizontal run of venting = add 1 EVL per foot of horizontal venting for each vertical run of venting = add 1/2 EVL per foot of vertical venting

CAUTION: EVL CANNOT EXCEED 25. Installations using an EVL exceeding 25 are not permitted.

YOU MUST USE APPROPRIATE 4" VENTING IF:

The EVL is 7 or more AND you are or above an altitude of 3000 ft

OR

The EVL is 15 or more

OR

Your heater is an insert

If in doubt, use 4" venting. This will reduce the possibility of future burn problems.

DO NOT USE MAKESHIFT MATERIALS OR MAKE COMPROMISES IN THE INSTALLATION. IT IS A FIRE HAZARD.

DO NOT INSTALL A FLUE DIAMETER IN THE EXHAUST VENTING SYSTEM OF THIS HEATER.

DO NOT CONNECT THIS HEATER TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

The vent pipes are on the exhaust side of the exhaust fan and are under pressure. Care must be taken to ensure that all joints are completely sealed to prevent any leakage of exhaust fumes and smoke into the house. If you smell smoke, the

venting has not been properly sealed. Use only high temperature (RTV) silicone for sealing. *Aluminum tape is not considered an adequate sealant.* At least 3 screws are needed for securing all vent pipe joints.

The venting of this heater is not allowed to pass through any closets, concealed spaces, floors, ceilings or attic spaces. If the venting must go through a wall or combustible partition, the installation must conform to the Installation Code for Solid Fuel Burning Appliance and Equipment CAN/CSA B-365. For more detailed venting information, please refer to your venting manufacturer's instructions

ii. Exhaust Vent Termination Requirements

- a. It is highly recommended that the venting include a minimum 3' vertical rise before termination. This will help prevent any odor of smoke in the house during a power failure.
- b. The exhaust vent may terminate into an open space. Under no circumstances is the vent allowed to terminate into closed or semiclosed spaces. Venting into a garage, under a sun deck, porch or any other space where the concentration of fumes may occur is prohibited.
- c. The exhaust vent must be at least:
 - *4 feet (1.2 m) below
 - *4 feet (1.2 m) horizontally from
 - *1 foot (0.3 m) above
 - any opening in the building such as doors, windows, ventilation air intakes, etc. (NOTE: You can reduce the clearance to 18 inches below or 18 inches horizontally from any opening ONLY if an air intake kit is installed).
- d. The exhaust vent opening must be a minimum of:
 - *12 inches (0.3 m) from the ground
 - *24 inches (0.6 m) from any combustible surface i.e. fence, plants, etc.
 - *7 feet (2.1 m) from any public walkway
- e. The exhaust air is EXTREMELY HOT. Caution must be taken to avoid contact with children, people, plants, animals, or any other object that may be affected by heat. It is recommended to use a vertical pipe to discharge the hot air at a safe elevation.
- f. Vertical installations must have an approved vertical vent cap and horizontal installations must have an approved horizontal vent cap. Areas where severe wind conditions exist and vent caps are exposed to unprotected open areas, additional protection (especially in horizontal installations) must be provided.

INSTALL ALL VENTING AT CLEARANCES SPECIFIED BY THE VENT MANUFACTURER

iii. Combustion Air Intake Requirements

There are 2 methods of supplying the heater with combustion air. They are as follows:

- a. Room Air: Conventional homes may use room air for combustion. Where room air is used, the exhaust pipe must incorporate a minimum 3' vertical section immediately adjoining the heater. It is highly recommended that the total exhaust vertical rise be longer than the total horizontal run and that the majority of the vertical rise be as close to the heater as possible.
- b. Outside Air: All installations can be connected to the exterior of the building using a non-combustible metal pipe, with a minimum 2 inch (50 mm) internal diameter or by using APR Part No: AK100 (Air Intake Kit). A larger diameter air intake pipe may be required if the length exceeds 3' (1 meter) or has several bends. Use of plastic pipes are not permitted.

In some installations, outdoor combustion air may be needed to ensure proper performance. If your heater burns poorly, experiences roll-out or back-drafts, outside combustion may be required.

The following restrictions apply to any and all installations:

- a. Use of plastic pipes is not permitted under any circumstances.
- b. The combustion air intake must terminate into a vented space (i.e. outside, vented attic, vented crawl space). This heater cannot draw air from a closed space such as a closed garage, airtight crawl space or any other sealed room.
- c. The elevation of the combustion air intake must be below the exhaust vent. An elbow may be used to lower the air intake point below that of the exhaust vent.
- d. Excessive lengths and elbows on the air intake pipe will cause airflow restrictions. A minimum of 2 inch (50 mm) or larger venting should be used for lengths exceeding 3' (1 meter). Increase the venting size as needed.
- e. When installing a **KOXY** KSH 120 in a garage/work shop, the combustion air must be taken from the outside or else the unit must be elevated a minimum of 15 inches above floor level if inside combustion air is desired.

7. KOZY Pellet Insert Additional Considerations

The **KOZY** Pellet Insert can be installed either in a masonry or listed factory built fireplace or alcove. The minimum opening for a <u>masonry or listed factory build fireplace</u> is pictured below. Please see the "Clearances to Combustibles" section for information on installing an insert in an alcove.

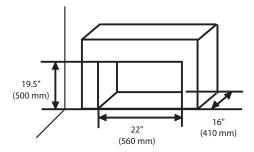


Figure 13. Minimum fireplace opening for the **KOZY** pellet insert.

i. **KOZY** Pellet Insert Additional Requirements

When installing and removing a **KOZ** pellet insert in a masonry or listed factory built fireplace, the following requirements must be met:

- a. The room in which the insert is installed must be sealed from the exterior. This can be done by sealing the chimney cavity to the venting either at the terminal or at the chimney damper.
- b. When installing the insert and it's surround into a masonry or listed factory built fireplace, the air flow of the existing fireplace must not be altered. Make sure no louvers, cooling air or outlet ports are blocked.
- c. When installing an insert, a full height listed chimney liner must be attached to both the insert flue collar and to the chimney top or a partial chimney liner may be attached to the insert flue collar and extending a minimum of 6 inches into the chimney cavity. The chimney liner must be properly sealed to the seal plate using high temperature (RTV) silicone. This chimney liner must be stainless steel.
- d. A permanent metal tag must be attached to the back of the fireplace. The metal tag will state the following: "After removal of this pellet insert, the fireplace must be restored to it's original state for safe use.".
- e. The fireplace can NOT be altered in any way except for the following situations:
 - 1. For installation of a chimney liner, the chimney damper may

be removed

- 2. External trim pieces of a fireplace can be removed only if they do not affect the operation of the fireplace upon removal and they can be reassembled when the insert is removed.
- 3. Where a L or PL type venting is used to vent the insert through a masonry fireplace (see "Typical Installation Configurations") a hole may be cut through the fireplace to accommodate the vent pipe. This hole must be properly repaired upon removal of the insert

ii. Surround Assembly

The **KOZ** Pellet Insert Surround can be seen in Figure 14. The surround comes in 3 separate pieces and needs to be assembled before being attached to the heater. Layout the top and sides of the surround on the floor as shown in Figure 14. Verify that each side piece mounting holes are aligned with the top piece mounting holes. Using the supplied 1/4" bolts, secure the side pieces to the top. Your surround is now ready to mount to the insert.

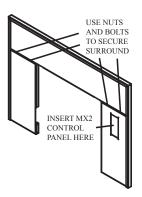


Figure 14. **KOZY** pellet insert surround

iii. KOZI Pellet Insert Installation

Please follow the following steps when installing a **KOZY** pellet insert:

a. Verify that the fireplace opening meets the insert's minimum requirements.

Working from the exterior of the building:

- b. Attach and seal the exhaust venting to the terminal using sheet metal screws and high temperature (RTV) silicone sealant.
- c. Insert the venting into the existing chimney and secure the terminal to the chimney. Ensure that the venting and chimney are properly sealed.
- d. If outside combustion air is being used, install the air intake as necessary.

Working from the interior of the building:

e. Verify that an electrical outlet is available. If not, have one installed.

- f. Place the insert part of the way into the opening.
- g. Attach and seal the free end of the exhaust venting to the pellet insert using sheet metal screws and high temperature (RTV) silicone sealant.
- h. If the top of the chimney was not sealed to the vent terminal in Step c, seal the existing chimney damper to the new pellet venting to prevent drafts to and from the home.
- i. Plug the power cord into the electrical outlet.
- j. Assemble the surround (if not previously assembled) and slide it on the insert (see the "Surround Assembly" section).
- k. Push the insert into the cavity until the surround touches the existing fireplace.

iv. KOZI Pellet Insert Removal

There may be some situations where the **KOZI** pellet insert needs to be removed from the fireplace; venting may need to be re-sealed, regular maintenance performed, etc.. Removal of the **KOZI** pellet insert heater from a fireplace is the reverse of installation with the following exceptions: make sure the insert is not operating, has had sufficient time to cool down and that power to the insert has been removed. Now you can pull the insert all the way out and do the maintenance on the insert or fireplace.

v. Operation and Maintenance

Please refer to the "Heater Operation" section of this manual for complete instructions on how to operate your **KOZI** pellet insert. Please note that fuel loading on the insert is done through the small opening on the top of the stove. To load fuel into the insert, remove the cover plate from the top of the insert, pour fuel into the opening and replace the cover plate. DO NOT place hands inside the opening to the hopper. There are moving parts inside the hopper which can cause bodily harm.

Maintaining the **KOZY** pellet insert is the same as maintaining a free standing pellet stove. Please read the "Maintenance" section for instructions on cleaning your insert, venting and other maintenance precautions.

8. <u>Mobile Home Additional Installation Requirements</u>

i. <u>Typical Mobile Home Installation Configuration</u>

The following figures describe some typical installations for mobile homes. Variations of these are possible. Common sense, safety and compliance with local building codes must be respected in any variation.

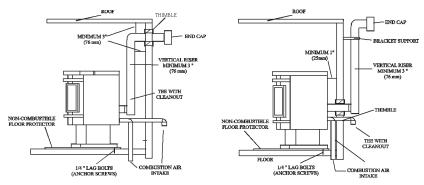


Figure 15 A. Mobile home installation Figure 15 B. Mobile home installation through wall; interior rise. through wall; exterior rise.

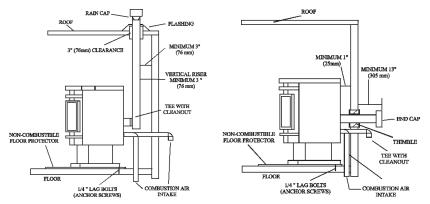


Figure 15 C. Mobile home installation Figure 15 D. Mobile home installation through roof. through wall.

ii. Recommendations for Mobile Home Installation

- a. Make sure there is an effective vapor barrier where the venting penetrates to the outside of the mobile home. Seal all openings in the vapor barrier as required.
- b. Make sure the mobile home has adequate ventilation. Your stove is a solid fuel burning appliance. As such, there is a possibility of smoke entering the room. By making sure the mobile home is adequately vented, you reduce the chances of smoke remaining in the mobile home.
- c. Make sure the venting is properly installed and sealed. Leaking vent pipes may set off smoke detectors in the mobile home. Also, some fuels may produce carbon monoxide which, in large amounts, can be fatal. Make sure the venting is installed properly to prevent leakage of carbon monoxide into the mobile home.
- d. If parts become damaged or need to be replaced, please contact

your local dealer or visit WWW.KOZISTOVES.COM. Do NOT replace parts with any other parts not specified by your local dealer or manufacturer

iii. Mobile Home Combustion Air Intake Requirements

All mobile home installations MUST use combustion air from the outside. This heater must be connected to the exterior of the mobile home using a non-combustible metal pipe, with a *minimum* 2 inch (50 mm) diameter. APR Industries Ltd. Part No. AK100 (Air Intake Kit) can be used for this purpose. Use of plastic pipes are not permitted. Please read the "Combustion Air Intake Requirements" section for more information.

iv. Exhaust Vent requirements

Venting a **KOZT** pellet burner for a mobile home is similar to that of a conventional home. Please refer to the "Typical Mobile Home Installation Configuration" section for typical venting configurations, the "Venting System" section for vent termination and other requirements. It is highly recommended that a 3' (1 meter) minimum of vertical venting be used (as show in Figure 15 A and Figure 15 B). This will reduce the chance of smoke spillage into the mobile home in the case of a power failure.

v. Other Mobile Home Installation Requirements

a. The heater must be securely anchored to the floor of the mobile home. There are 2 holes located on the base of the stove near the back (4 on the KSH models). Use 1/4" lag bolts (not supplied) in these holes to anchor the stove to the floor of the mobile home. For the KSH models, the side panels will need to be opened to access these holes.

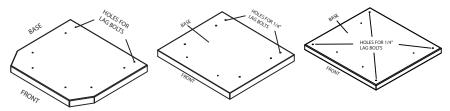


Figure 16A. BayWin Anchor Holes

Figure 16B. Model 100 Anchor Holes

Figure 16 C. KSH Model Anchor Holes.

b. There must be a non-combustible floor protector placed underneath the heater and extending a minimum of 6" (150 mm) in front of the heater (see "Clearance to Combustibles" section for more information).

- c. This heater can not be installed in any sleeping room of the mobile home.
- d. This heater must be grounded to the steel chassis of the mobile home (unless this is not required by local code).
- e. The installation must be in accordance with the Manufactured home and Safety Standard (HUD), CFR 3280, Part 24.

WARNING: DO NOT INSTALL IN A BEDROOM OF A MOBILE HOME

CAUTION: THE STRUCTURAL INTEGRITY OF THE FLOOR, WALL AND ROOF OF THE MOBILE HOME MUST BE MAINTAINED

IV. OPERATION

1. General Overview

The first step in understanding your new **KOZI** heater is to familiarize yourself with its operation. Your heater has 3 main systems: feed, combustion and circulation. These 3 systems work together to produce enough heat for your room. The feed system uses an auger to 'feed' the pellet fuel into the burn pot. The combustion system provides the air for the fuel to burn and pushes the "smoke" outside through the vent pipes. The circulation system takes cold air from the room and pushes it through the heat exchanger where it will warm up and flow back into the room as hot air. These 3 main systems are all controlled by the **MX**TM**2** control system (see Figure 17). The **MX**TM**2** control system will be described in more detail later.



Figure 17. $\mathcal{M} \times^{TM} \mathbf{2}$ control board.

2. Safety Features

a. Pressure switch: This safety device is used to turn the feed off if pressure is lost in the stove.

Please note that if your door is open or your ash gates/tray are not properly sealed, your pellet heater will not feed.

- b. Circulation fan override: If your pellet heater begins to overheat, this safety device switches the circulation fan to the highest possible setting to try to cool your heater down to a safe temperature.
- c. High limit/manual reset thermal disk: if the circulation fan override fails to cool the heater down fast enough, this thermal disk will turn the feed off. This final safety device guards against your heater

- overheating. If this thermal disk trips, the right side panel will need to be opened and the thermal disk reset. See "Maintenance" and "Troubleshooting" sections for more information.
- d. Hopper lid switch: This safety device stops the auger from turning when the hopper lid is opened, preventing any bodily harm.

3. Electric Igniter

Your **KOZY** pellet heater is factory equipped with an electric igniter. The electric igniter is a convenient way of lighting the fire in your heater without the use of lighter gels or starter fuels.

4. $\mathcal{M} \times^{TM} 2$ Control

i. Basic Description

The $\mathcal{M} \times 2^{TM}$ control is a digital control board that uses a computer to control the operation of your heater. You should be familiar with all of the buttons on this control before using your heater. Each button and their function are described here.

ii. "AUTO, HIGH/LOW, MANUAL" Mode Switch

Your pellet heater is capable of operating in 3 different modes: "AUTO", "HIGH/LOW" and "MANUAL". Figure 18 will help you determine which mode is suitable for use in your home. More information on each of the modes is provided later.

Mode Selection Guide					
Switch Position	Igniter Required	Thermostat Required	Description		
AUTO*	Yes	Yes	Turns Heater ON and OFF based on wall thermostat, remote control, wall switch or other switching device.		
HIGH/LOW	ů ,		Switches heater from user setting to factory LOW setting based on wall thermostat, remote control, wall switch or other switching device.		
Relies on a person to press the ON/OFF button located on the control pannel. Will automatically light if equiped with electric igniter.					
* CAUTION: May result in shortened igniter life. See complete mode description.					

Figure 18. Mode selection.

a. "AUTO" Mode: With the switch in this position, your heater will turn itself on and off based on an externally wired, millivolt rated switching device. The most common use of this mode is with a

wall thermostat. When wired to a wall thermostat, the heater will automatically light itself when the room temperature falls below the thermostat setting and will automatically turn itself off when the temperature reaches the thermostat setting. This mode can also be used with a wall switch or remote controls. Consult you local dealer or visit WWW.KOZISTOVES.COM for more information on available options.

Please note that "AUTO" mode, when used in conjunction with a wall thermostat, can result in "reduced" igniter life. Always use your stove on the lowest possible heat setting when in this mode. This will help reduce the number of ignition cycles and will help prevent premature igniter failure.

- b. "HIGH/LOW" Mode: With the switch in this position your heater will alternate from a *factory preset low setting* to the setting you have chosen with the "HEAT SELECT" button (see "HEAT SELECT" button section for more information). This mode is exclusively used with a wall thermostat and is highly recommended since it can create substantial fuel savings.
- c. "MANUAL" Mode: When used in this mode, your stove is controlled manually from the control panel only. When the heater is in the "MANUAL" mode, the heater will not respond to any external switching devices (i.e. wall thermostat, remote control, etc.). To start the stove you must press the ON/OFF button. The stove will go through a start up cycle and once it has warmed up sufficiently, the stove will operate and the heat setting chosen. The stove will continue to operate until it is not needed. To shut the stove down press the ON/OFF button again and the stove will go into a shut down sequence. Once the stove is cold, it will automatically shut the fan motors off.

iii. "ON/OFF" Button

This button allows you to turn the stove on and off. Once pressed, the stove will go through a start-up sequence and the ON/OFF light will blink. During this time, the feed rate is preset to feed slowly until the stove reaches a certain temperature. Once the stove reaches the operation temperature the ON/OFF light will stop blinking and stay on solid. The stove will then operate at the "HEAT SELECT" setting chosen.

iv. "HEAT SELECT" Button & Bar Graph

There are 5 possible heat settings for your heater. Each setting is indicated in the bar graph; "1" being the lowest, "5" being the highest. Pressing the "HEAT

SELECT" button will change the heat setting as indicated in the bar graph. Each time the button is pressed, your heater will go to the next higher heat level (from 1 to 2, 2 to 3, 3 to 4, etc.). Once the heat level reaches the highest setting (5) and the "HEAT SELECT" button is pressed again, the heat level will return to the low setting (1).

Please note that during the start up period you will be able to adjust your "HEAT SELECT" setting, but the stove will remain in a start up sequence until the stove reaches the operation temperature. Your heater will always remember which heat setting was used last and return to that setting the next time the stove is turned on (power failures will result in this setting being lost).

v. "AUGER" Button

Your heater uses and auger system to feed fuel into the burn pot. When the auger system is working the "AUGER" light will blink. The higher the "HEAT SELECT" setting, the faster the "AUGER" light will blink. The lower the "HEAT SELECT" setting, the slower the "AUGER" light will blink.

Holding the "AUGER" button down will run the auger system continuously. *This button should only be used to fill the auger with fuel when it is empty*. Using this button during normal operation will cause too much fuel to fall into the burn pot and may result in damage to the heater or an unsafe situation.

vi. "FAN" Button

During normal operation of your heater, the circulation fan (that blows hot air into the room) will operate at a preset speed based on the heat setting. The speed can be changed by changing the heat setting or by pressing the "FAN" button. The "FAN" button is used to override the factory setting and run the circulation fan on the highest setting. Pressing the "FAN" button again will slow the fan down. There are 5 settings in total for the fan speed. Once the fan is in the lowest setting, pressing the "FAN" button again will bring the fan back up to the highest setting. If you want to operate the fan at the original preset setting, first press the "HEAT SELECT" button to change the setting. Now, press the "HEAT SELECT" button until you bring it back to the setting you want to operate the stove at.

vii. "TRIM" Button

This button is used to compensate for fuel variations at the *lowest heat setting only*. With the heater at the lowest heat setting (1) pressing this "TRIM" button once will increase the feed rate slightly to above the normal low setting. At this "TRIM" setting the (1) and (5) lights will be on. Pressing the "TRIM" button again will cause the feed rate to decrease slightly below the low setting. At this

"TRIM" setting the (1) and (4) lights will be on. Pressing the "TRIM" button again will return the feed rate to the normal low setting. At this "TRIM" setting only the (1) light will be on.

viii. <u>Wall Thermostat, Wall</u> Switch or Other Switching Device

The MX2TM control is capable of using an external millivolt switch (such as a wall thermostat or remote control) to turn the stove on and off. Any millivolt rated switching device can be used with this control. The switch/thermostat must be wired to the terminals on the control board as shown in Figure 19.

TO PREVENT INJURY OR DAMAGE TO THE HEATER, ALWAYS UNPLUG THE HEATER FROM THE POWER OUTLET BEFORE SERVICING

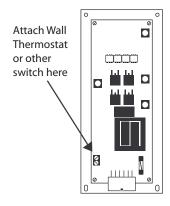


Figure 19. Wall thermostat terminals.

ix. <u>Damper Control</u>

The damper control rod is located on the left side of the heater (as you are looking at the stove from the front). This rod controls the amount of air passing through the burn pot. By pushing the control rod in, you reduce the amount of air passing through the burn pot. By pulling the rod out, you will increase the amount of air passing through the burn pot. Once set, you should not need to adjust the damper. The MX2TM control will automatically change the exhaust fan speed to adjust the amount of combustion air needed for each heat setting.

Each heat setting will have a corresponding damper opening. Figure 20 lists the heat setting and corresponding damper opening:

	BAYWIN	MODEL 100, KSH SERIES		
HEAT SETTING	DAMPER OPENING FROM FULLY CLOSED POSITION	HEAT SETTING	DAMPER OPENING FROM FULLY CLOSED POSITION	
1	0.125" (3.18 mm)	1	0.375" (9.53 mm)	
2	0.375" (9.53 mm)	2	0.5" (12.7 mm)	
3	1" (25.4 mm)	3	1" (25.4 mm)	
4	1.5" (38.1 mm)	4	1.5" (38.1 mm)	
5	FULLY OPEN	5	FULLY OPEN	

Figure 20. Heat and damper settings.

WARNING: This wood heater has a manufacturer-set minimum low burn rate that must not be altered. It is against federal regulations to alter this setting or otherwise operate this wood heater in a manner inconsistent with operating instructions in this manual.

x. Starting Your Heater for the First Time

Read the following instructions completely before attempting to light your heater for the first time. This method applies to all models of operation ("AUTO", "HIGH/LOW", "MANUAL"). For "AUTO" mode, use thermostat or other switching device in lieu of the "ON/OFF" button.

Once your heater is properly installed, complete the following steps to light it for the first time or whenever your heater runs out of fuel:

- a. Fill the hopper with pellet fuel. At this time the tube is empty. It needs to be filled before the heater can be operated properly.
- b. Press the "ON/OFF" button: The "ON/OFF" light and "AUGER" light should begin to blink. The motors should also begin to turn.
- c. Adjust the "HEAT SELECT" light to the desired level.
- d. Adjust the damper opening according to the heat setting chosen (see Figure 20).
- e. Press and hold the "AUGER" button; the "AUGER" light should be stay lit until the button is depressed.
- f. Continue to hold the "AUGER" button until fuel begins to drop into the burn pot (located inside the burn chamber, see "Stove Cross Section" diagram for exact location). This may take several minutes. If the heater turns OFF before the pellets begin to drop into the burn pot, repeat steps b, c, d and e.
- g. Release the "AUGER" button once the pellet fuel begins to drop.
- h. Monitor the burn pot. A flame should appear within 5-8 minutes. Allow the flame to stabilize. IN THE EVENT YOUR HEATER SHUTS OFF BEFORE THE FLAME IS STABLE, or if a flame does not appear, press the "ON/OFF" button once again to get the stove started.
- i. Refer to the "Adjusting your Heater" section for more information on operating your heater properly.

xi. Starting/Lighting your Heater

To start your heater, complete the following steps:

- a. Ensure there is adequate amount of fuel in the hopper and that all ash gates, ash tray and doors are closed.
- b. Press the "ON/OFF" button. The following should happen:
 - 1. The exhaust fan will start.
 - 2. The circulation fan will remain off.
 - 3. The feed system will start. The "AUGER" and "ON/OFF" lights will begin to blink.
 - 4. The igniter will start and you should see a flame within 5-8 minutes.
- c. Adjust the "HEAT SELECT" setting to the desired level.
- d. Adjust the damper opening according to the heat setting chosen (see Figure 20).
- e. Allow the flame to stabilize for 15-30 minutes.
- f. If the heater shuts off during the start up cycle and there is still a flame, press the "ON/OFF" button again to start another start up sequence.

WARNING: Make sure the amount of fuel in the burn pot does not exceed the height of the burn pot at any time during operation. This can cause the pellet stove to over fire and create severe damage to your heater.

DO NOT BURN GARBAGE OR FLAMMABLE FLUIDS SUCH AS GASOLINE, NAPHTHA OR ENGINE OIL.

NEVER USE GASOLINE, GASOLINE-TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID OR SIMILAR LIQUIDS TO START OR 'FRESHEN UP' A FIRE IN THIS HEATER. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE HEATER WHILE ITS IN USE.

HOT WHILE IN OPERATION. KEEP CHILDREN, CLOTHING AND FURNITURE AWAY. CONTACT MAY CAUSE SKIN BURNS.

DO NOT OVER-FIRE. IF THE HEATER OR VENTING BEING TO TURN RED OR GLOW, THE HEATER IS OVER-FIRING. OVER-FIRING YOUR HEATER WILL VOID YOUR WARRANTY.

xii. Stopping your Heater

To stop your heater, simply press the "ON/OFF" button (for the "AUTO" mode, switch thermostat or other switching device to "OFF"). This will cause the feed system to stop (the "AUGER" light will stop blinking) and the flame should die out within 5 minutes. The exhaust fan and circulation fan will continue to

run until your heater is cold (approximately 30 minutes). DO NOT turn OFF electrical power to stop the heater, as this will result in your heater overheating and may damage the heater.

xiii. Adjusting your Heater

The heater will not work properly if the ash door or the glass door are not properly closed OR if the wrong size of venting is used. It is equally important that you use good quality, wood pellet fuel. Some fuels have a tendency to leave ash and clinker deposits in the bottom of the burn pot. Poor pellet fuel will create a poor burn, excessive ash and will plug the burn pot. Refer to the "Fuel Requirements" section for more information on fuel quality.

To increase the heat output of your heater, simply press the "HEAT SELECT" button and adjust the damper accordingly (see Figure 20). In a few minutes the flame size and heat output will increase.

Having the proper draft will allow your stove to burn clean and efficiently. When the stove is burning correctly, you should see minimal to no visible smoke from your exhaust venting. When smoke is present, there is a chance of high CO emissions being produced by the stove and the stove operates less efficiently. When there is minimal or no smoke visible, the stove will produce low CO emissions and is operating much more efficiently. If you see continuous smoke, you may have inadequate or excess draft so adjust the draft accordingly.

In certain situations (i.e. venting configuration, poor pellet, location of the stove, etc.) you may find that you have inadequate or excessive draft. If the pellets begin to pile up in your burn pot and the flame changes appearance (i.e. larger, dark in color and lazy), you have inadequate draft. Open the damper slightly (approximately 1/8" increments) and allow 10-15 minutes for the flame to stabilize. Repeat if necessary. If the pellets seem to burn too quickly and the flame changes appearance (i.e. smaller, really bright in color and very active), you have excessive draft. Close the damper slightly (approximately 1/8" increments) and allow 10-15 minutes for the flame to stabilize. Repeat if necessary. You will notice that a proper flame will look bright in color, active and the pellets do not pile up or burn too quick.

V. MAINTENANCE & CLEANING

Formation and Removal of Soot and Flyash - During normal operation, your heater produces a lot of flyash. This flyash will collect in the vent pipes and inside your pellet heater and restricts the flow of the flue gases. Incomplete combustion occurs during start-up, shutdown and incorrect operation of your pellet heater. Incomplete combustion creates soot which will also collect in the vent pipes and within the pellet heater. The soot and fly ash deposits in your heater and venting system is harmful to the performance of your heater.

Improper maintenance leads to poor performance, component failure and can be dangerous. Please adhere to the following maintenance schedule:

Do not use abrasive chemicals to clean the heater and/or labels placed on the heater. These chemicals can damage both the paint and labels on the heater.

ALLOW THE HEATER TO COOL TO ROOM TEMPERATURE AND UNPLUG THE HEATER BEFORE PERFORMING ANY MAINTENANCE.

Before each heating season:

- a. Check the venting system. It is imperative that you check the venting system for any blockages after any prolonged shut down period. If there is a significant amount of soot build up, it should be removed to prevent the risk of a chimney fire. By making sure the exhaust venting system and the heater itself are being maintained properly and are cleaned on a regular basis, you reduce the likelihood of a chimney fire occurring. Please contact your local building or fire officials in your area for information on how to handle a chimney fire. Have a plan of action ready in case a chimney fire occurs.
- b. Clean behind the back heat shield as well as all exhaust passages. Ashes can build up behind the back heat shield and inside the exhaust passages. To remove the back heat shield you must remove 4 bolts located at each corner of the heat shield. On some models the heat shields must first be removed by removing the 2 bolts holding them in place. Using a brush, remove all of the ashes that have built up on the back wall of the combustion chamber, on the inside of the heat shields as well as in the exhaust passage. Inspect the auger chute gasket at this time. Make sure the gasket is still in good condition and that it is in the original position when the back heat shield is bolted back into position. Make sure to clean behind the back heat shield after every 3 tons of fuel burned. See Figure 21 and Figure 22 for removal of the heat shields.

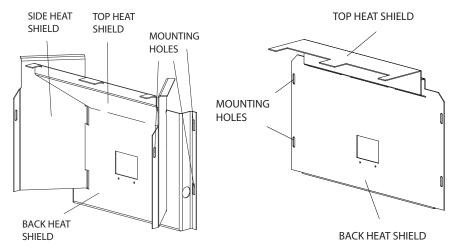


Figure 21. Model 100 and KSH 120 Heat Shields

Figure 22. BayWin Heat Shields.

c. Clean the exhaust fan and housing. Ash accumulation on the fan blades will reduce the life of your exhaust fan. Frequent cleaning will help extend the life of this component. Open the left side panel to access the exhaust fan. Using a Common (flat head) screwdriver, remove the 6 sheet metal screws holding the fan motor to the housing (See Figure 23). Using a brush, clean all ash from the exhaust fan blades and housing.

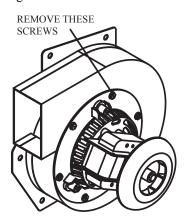


Figure 23. Exhaust fan assembly.

d. Inspect the condition of the door gasket periodically and replace it as necessary. It is important to make sure the door gaskets are in good condition. Gaskets in poor condition will not allow the door

- to seal properly and the heater will not function as efficiently.
- e. Oil the circulation fan motor. To oil the motor bearings, the right hand side panel must first be opened. This is done by removing the 2 screws near the front of the stove as shown in Figure 24. Use a Robertson (square head) or Common (flat head) screwdriver to remove the screws. You will now be able to swing the panel open and access the circulation fan. There are 2 oil ports located on the top of the motor, one near the end and one near the fan housing as shown in Figure 25. There may be rubber plugs in one or both of these oil ports. These plugs must be removed prior to and replaced after oiling. Place a few drops of a light oil (i.e. sewing machine oil or a 3 in 1 oil) in each port.

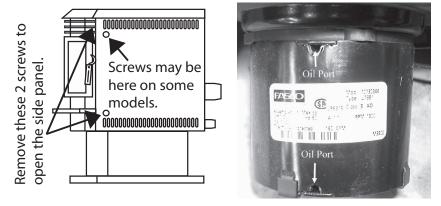


Figure 24. Holes for screws on the right Figure 25. Oil ports on a circulation side panel.

f. Perform weekly maintenance.

Weekly or more frequently if needed:

1. Pull and push the cleaning rod which is located in the center, above the door (see Figure 26). This will remove the ash deposits on the heat exchanger tubes. The removed ash will fall on the top heat shield, located in the burn chamber.

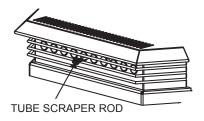


Figure 26. Tube scraper rod to clean the heat exchanger pipes.

- Lift the top heat shield. Remove it carefully as there may be a significant amount of ash on it. Dump the ashes into the burn chamber.
- 3. Using a brush, clean the top heat shield and remove it from the heater.
- 4. Remove the burn pot, burn pot stand and splash guard (Figure 27) and clean them thoroughly. Lift the burn pot and splash guard to remove. Lift up on the burn pot stand and pull towards you to remove. Make sure there are no ashes remaining in the burn pot stand and that all the holes in the burn pot are clear. Failure to do so can be a fire hazard. Place all ashes into a metal container with a tight fitting lid.

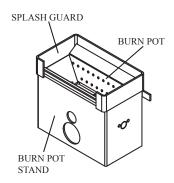
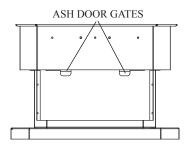


Figure 27. Burn pot stand assembly.

- 5. Using a brush, clean the walls and floor of the burn chamber.
- 6. If your unit is equipped with a large ash tray, open the ash tray slightly and pull on each ash gate (Figure 28) until the ash falls from the burn chamber into the ash tray. Do NOT pull the gates too far open as they may fall out. For models equipped with the small ash tray (KSH 120 & Model 100 Insert, Figure 29) turn the 2 coil handles counter-clockwise to release the latch mechanism and pull the ash tray out. For models with no ash tray, scoop out the ashes into a metal container with a

tight fitting lid. An alternate method to cleaning the ashes in the burn chamber area is to purchase a pellet vacuum. These vacuums are specifically designed for the removal of ashes in a pellet stove.



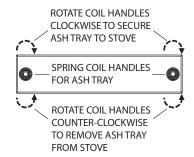


Figure 28. Ash gates for a **KOZY** pellet stove.

Figure 29. Coil handles on the ash tray for the KSH 120 and Model 100 Insert.

7. Close the ash gates (if equipped) and remove the ash tray. Dispose of the ashes in a safe manner. If the ashes are stored in a container, make sure the lid is secure. DO NOT place the container on a combustible surface. Replacement of ash tray is reverse of removal.

Disposal of Ashes - Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes were disposed of by burial in soil or otherwise locally dispersed, the should be retained in the closed container until all cinders have been thoroughly cooled. Do not place any other waste materials in this container

- 8. Empty out the hopper once every 2 weeks. Vacuum all the sawdust buildup in the hopper and auger chute opening. Cleaning out the sawdust from the hopper will prevent a hopper fire from occurring.
- 9. Re-install all removed parts in their original positions.
- 10. Clean the glass with a mild glass cleaner when dirty. DO NOT clean the glass when the door is hot. Cleaning the glass will allow you to see the flame and how it is burning. This is very important to see if the heater is burning properly or not. DO NOT hit the glass or slam the door shut. This may cause the glass to crack or break. DO NOT operate the heater if the glass is cracked or broken. DO NOT replace the glass with any type of glass other than an APR Industries Ltd., factory approved

glass. If the glass cracks or breaks, turn the heater OFF. DO NOT operate the heater until the glass has been replaced.

NOTE: Depending on the type of fuel you use and the frequency that you use the pellet stove, you may need to clean the stove more frequently.

After each heating season:

- a. Remove all pellet fuel from the hopper. Run the heater to empty the auger tube. Vacuum the hopper and auger tube. Clean the rest of the heater.
- b. Open up both side panels. Clean out any pellets, dust, ashes or debris that may have built up in the back of the pellet stove.

VI. TROUBLESHOOTING

1. Troubleshooting

Your KOZI pellet heater is equipped with a diagnostic light feature. When a problem occurs, the heat setting bar graph will light up to indicate where the problem may be. Each light has been numbered for easy identification. The chart below has been included to help you determine which corrective action should be taken. A complete description of each corrective action is included in the following pages of this manual. Some problems, such as flame problems, will not cause the diagnostic lights to light up.

MX2 Control Trouble Shooting Guide						
Problem	Light Status	Possible Causes	Remedy			
			Check to see if heater is			
			plugged in.			
	All lights off	No power.	Check fuse on control board			
			Check electrical outlet for power.			
	//O.F. 1.1.1.F. 1	Exhaust vent and exhaust fan are plugged	Clean exhaust venting and exhaust fan.			
		Exhaust passage and exhaust	Clean exhaust passage and			
	#2 light blinks	box pressure tap are plugged.	pressure tap.			
Heater will not feed pellets.	(Pressure system failure)	Pressure switch tube is cracked or broken.	Replace pressure switch tube.			
pellets.		Pressure switch has failed.	Replace pressure switch.			
		Exhaust fan has failed.	Replace exhaust fan.			
		Hopper is empty.	Fill hopper with fuel.			
	#3 light blinks	Exhaust fan thermal disk has	Replace exhaust fan thermal			
	(Proof of flame	failed.	disk.			
	failure)	Auger jam.	Empty hopper and clean out			
	ialiaro)	• •	auger.			
		Auger motor has failed.	Replace auger motor.			
	#4 light blinks	Manual reset thermal disk has failed.	Replace manual reset thermal disk.			
Stove won't turn off.		Exhaust fan thermal disk has	Replace exhaust fan thermal			
		failed.	disk.			
	Normal	Stove in "Cool Down" mode.	Allow sufficient time for the			
			stove to cool down.			
		MX2 Control board has failed.	Replace MX2 Control Board.			
	Normal	No pellet fuel.	Add fuel to the hopper.			
		Burn pot dirty.	Clean burn pot.			
Stove will not light.		Fuse blown.	Replace fuse.			
Otove will not light.		Igniter slipped out of igniter tube.	Push igniter back into place.			
		Igniter has failed.	Replace igniter.			
		No power to igniter.	Replace MX2 Control Board.			
Fuel piles up.	Normal	Burn pot dirty.	Clean burn pot.			
		Poor quality fuel.	Change fuel supplier.			
Chart flame on kink		Poor quality fuel.	Change fuel supplier.			
Short flame on high feed.		Heat exchanger requires cleaning.	Clean heat exchanger.			
Too large and dark orange flame.		Poor quality fuel.	Change fuel supplier.			
Smell of smoke in room.	Normal	The pellet venting joints not sealed properly.	Seal all joints with high temperature RTV silicone sealant.			

2. Corrective Actions

BEFORE PERFORMING ANY SERVICE, MAKE SURE THE HEATER IS COLD AND UNPLUGGED. We strongly recommend using qualified service people.

Proof of Flame Failure

- a. Verify that there is sufficient fuel in the hopper and that the heater has run for long enough to fill the auger tube (See "Starting Your Heater For the First Time" section).
- b. Verify that the auger has not jammed. Occasionally, fuel can become lodged in the auger and prevent the auger's proper operation. Open one of the side panels and grasp the auger motor. Move the auger motor back and forth. It may be difficult to move at first, but should move relatively freely. If it will not move, empty the hopper and look for foreign objects in the auger.
- c. Verify that the auger motor is working. Plug the heater in. Without lighting a fire, start the heater. Verify that the white plastic fan on the auger motor is turning. If it does not turn, check power at the auger motor and replace the auger motor as necessary. Remember to unplug the heater before attempting any service.
- d. Verify that the shaft of the auger motor is secured to the auger properly. Empty the hopper and locate the auger bolt (approximately 1/4" square head) on the auger. Remove the bolt and make sure the hole is aligned with the flat portion of the auger motor shaft. Re-install the bolt and tighten.
- e. If none of the above resolve your problem, contact your local **KOZI** dealer.

ii. Pressure Switch Failure

- a. Verify that the heater is clean. Clean all venting and exhaust passages in the stove. Refer to the "Maintenance" section for more information on cleaning your heater.
- b. Verify that the pressure switch tube is not cracked or loose. Replace as required. Also, verify that the pressure port on the stove is clean.
- c. Verify that the exhaust fan is in good working condition. Plug the heater in. Without lighting a fire, start the heater. You should hear the exhaust fan start and come to full speed relatively quickly. If the exhaust fan is not working or is slow to start, check for power at the exhaust fan and replace the exhaust fan as necessary. Remember to unplug the heater before attempting any service.
- d. Verify that the pressure switch is working properly. Apply a slight vacuum to the pressure switch tube. The pressure switch should "click" when a vacuum is applied. Replace as necessary. NOTE:

Pressure switch failures are rare.

e. If none of the above resolve your problem, contact your local KOZI dealer

iii. Manual Reset Thermal Disk Failure

This device is a safety device and should not be reset unless the cause of the problem is found and repaired. Typical causes are power failures while the heater is running and circulation fan failures.

- a. Verify that the circulation fan is in good working condition. Plug the heater in. Start the heater and press the "FAN" button on the control board. You should feel a significant amount of air coming from the heat exchanger. If no air is felt, check for power at the circulation fan and replace the circulation fan if necessary. Remember to unplug the heater before attempting any service.
- b. Verify that the circulation fan override thermal disk is working properly.
- c. Reset the Manual Reset Thermal Disk. Open the right side panel. Mounted on the back of the body of the stove you will see 2 thermal disks. One of these will have a red push button. Press the button to reset the thermal disk.
- d. If your Manual Reset Thermal Disk is continuously tripping, contact your local **KOZI** dealer.

iv. Ignition Failure

- a. Verify for power at the igniter and replace the igniter as necessary.
- b. Verify that the burn pot is clean. See "Maintenance" section for more information on cleaning your heater.
- c. Verify that the igniter is in the correct position. Remove the back panel on your stove to access the igniter. When the stove is cold and unplugged tap the brass bushing on the igniter forward with a mallet to ensure that the igniter hasn't slipped out at the back of the stove.
- d. If none of the above resolve your problem, contact your local **KOZI** dealer.

v. Overheating

This problem occurs when the circulation fan setting is too low for the amount of heat generated or if the circulation fan fails.

a. Verify that the circulation fan is working properly. With the heater plugged in, start the heater. Press the "FAN" button on the control board. You should feel air coming from the heat exchanger. If not, check to see if there is power coming to the circulation fan and replace circulation fan or control board as necessary.

- b. If the heat is not needed, reduce the feed and damper accordingly. Continue to reduce the feed until the circulation fan does not run on high.
- c. If none of the above resolve your problem, contact your local KOZI dealer

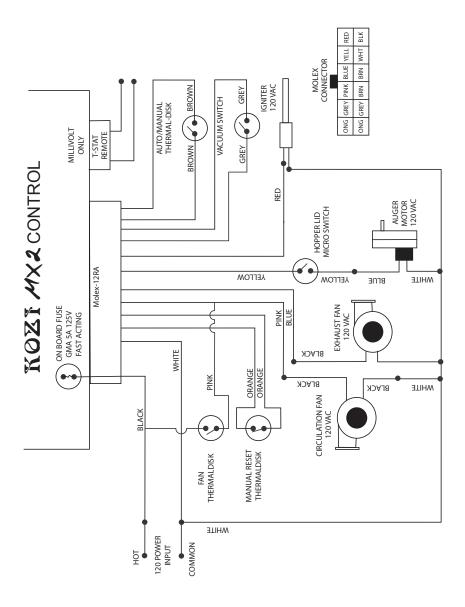
vi. Lack of Air

The most common cause of flame problems are improperly sealed doors and ash trays, dirty heaters, poor fuel, improper installation and improper damper adjustment.

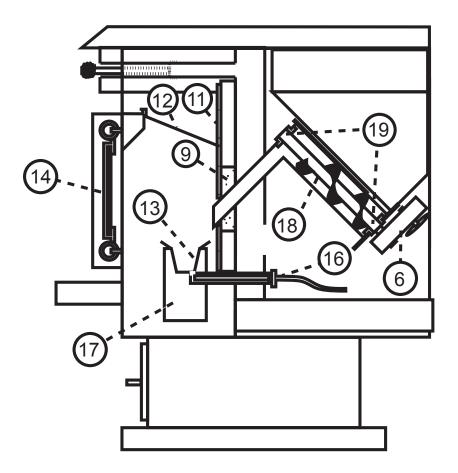
- a. Verify that the door, ash tray and ash gates are properly closed and sealed. Replace gaskets as necessary.
- b. Clean your heater thoroughly. Refer to the "Before Each Heating Season" section found in the "Maintenance" section for detailed cleaning instructions.
- Adjust your heater properly. Refer to the "Adjusting Your Heater" section.
- d. Try using various brands of fuel. Although most manufacturer's claim to produce "premium" grade wood pellets, contaminants and moisture will affect fuel quality.
- e. If your heater is less than one year old, your venting and/or air intake may be too restrictive. Contact your local **KOZI** dealer for venting recommendations.
- f. If none of the above resolve your problem, contact your local KOZI dealer

VII. DIAGRAMS AND PARTS LIST

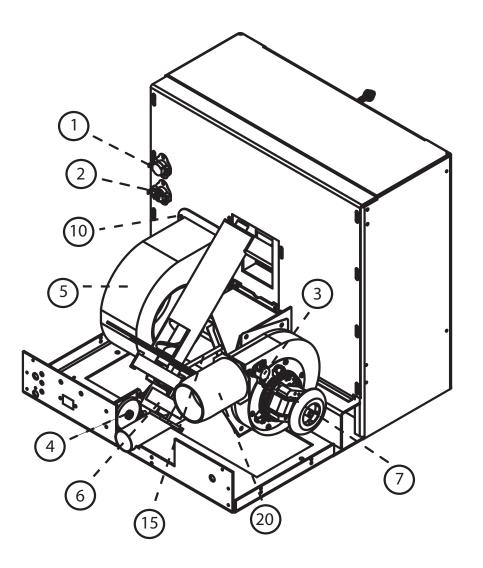
1. KOZY MX2TM Control Circuit Diagram



2. Stove Cross Section



3. Equipment Compartment



4. Parts List

Electrical Components Circulation Fan Override, Thermal Disk					
Circulation Fan Override, Thermal Disk					
Circulation I am Override, Internation	TDKLMT04				
Manual Reset, Overheat Thermal Disk	TDKMR01				
Exhaust Temperature Thermal Disk	TDKLMT01				
Static Pressure Switch	SWC09902				
Circulation Fan	FAN12001				
Auger Motor	MTR12001				
Exhaust Fan	FAN12003				
MX2™ Control Board	CBDKZ001				
Wiring Harness for ℳX2™ Control Board	WIRHDC01				
Hopper Lid Switch	1DM1				
Gaskets & Gasket Kits					
Ash Tray Rope Gasket (Model 100 and KSH)	GKT00304				
Auger Chute Gasket Kit	GKT9900				
Circulation Fan Gasket	GKT00202				
Glass Gasket Kit, BayWin (Includes inner and outer glass gasket)	GKTGLBW				
Glass Gasket, Model 100 & KSH, U-Tape Gasket	GKT00306				
Door Rope Gasket, Model 100 & KSH, Cast Iron Door	DORRP100G				
Door Rope Gasket, Model 100 & KSH, Metal Fabricated Door	DORRP100B				
Door Rope Gasket, Baywin	DORRPBW				
Exhaust Fan Motor Mounting Gasket (Round)	GKT00208				
Exhaust Fan Mounting Gasket (Polygon Shape)	GKT00209				
Not Shown Exhaust Fan Mounting Gasket (Polygon Shape) GKT00209 Heat Shields & Other Parts					
Back Heat Shield, Model 100 & KSH	BCKSL100				
Back Heat Shield, BayWin	BCKSLBW2				
Side Heat Shield, Left, Model 100 & KSH	HTSLL100				
Side Heat Shield, Right, Model 100 & KSH	HTSHR100				
Top Heat Shield, BayWin	TPHSL0BW				
Top Heat Shield, Model 100 & KSH	TPHSL100				
Burner Pot	BPOT1005				
Center Glass, BayWin	GLSCTBW				
Side Glass, BayWin (1 only)	GLSSDBW				
Door Glass, Large, Model 100 & KSH	GLS0LKSH				
Static Pressure Switch Tube	TUBSPS01				
Hot Air, Electric Igniter	EC2-HA-120				
Burner Pot Stand	BPOTSTD-HA				
Auger	MIS00001				
Auger Metal Mounting Plate	MIS00073				
Bronze Bushing for Auger Assembly	BUS00101				
Exhaust Tube Assembly	TUB09911				
	Static Pressure Switch Circulation Fan Auger Motor Exhaust Fan **X***X*** Control Board Wiring Harness for **X***X*** Control Board Hopper Lid Switch **Gaskets & Gasket Kits** Ash Tray Rope Gasket (Model 100 and KSH) Auger Chute Gasket Kit Circulation Fan Gasket Glass Gasket Kit, BayWin (Includes inner and outer glass gasket) Glass Gasket, Model 100 & KSH, U-Tape Gasket Door Rope Gasket, Model 100 & KSH, Cast Iron Door Door Rope Gasket, Model 100 & KSH, Metal Fabricated Door Door Rope Gasket, Baywin Exhaust Fan Motor Mounting Gasket (Round) Exhaust Fan Mounting Gasket (Polygon Shape) **Heat Shields & Other Parts** Back Heat Shield, Model 100 & KSH Back Heat Shield, BayWin Side Heat Shield, Right, Model 100 & KSH Side Heat Shield, Right, Model 100 & KSH Top Heat Shield, BayWin Top Heat Shield, BayWin Top Heat Shield, Model 100 & KSH Burner Pot Center Glass, BayWin (1 only) Door Glass, Large, Model 100 & KSH Static Pressure Switch Tube Hot Air, Electric Igniter Burner Pot Stand Auger Auger Metal Mounting Plate Bronze Bushing for Auger Assembly				

VIII. WARRANTY

APR Industries Ltd. honors a five year, limited warranty on all steel fabricated parts and a one year warranty on electrical parts to the original purchaser. The warranty is non-transferable and the coverage begins from the original date of the purchase.

The following items are NOT covered under warranty:

- Glass
- · Gasket and Seals
- Cast Iron Body Components
- Ceramic Bricks
- Burn Pot
- Paint and Powder Coating
- Gold Plating
- Inner Heat Shields
- Auger Motor
- · Self Igniter
- Glass SaverTM

The limited warranty covers defects in the material and poor workmanship as long as the heater has been installed and operated in accordance with the Owner's Manual. Warranty is null and void if the heater is misused. It is the option of APR Industries Ltd. whether to repair or replace the parts.

To start a warranty claim, please contact your **KOZI** dealer. You must supply your **KOZI** dealer with the model, serial number and the proof of purchase of your **KOZI** product. APR Industries Ltd. may require that part(s) be returned/shipped back for inspection. Digital pictures may also be needed to support the warranty claim.

Prior to shipping a defective unit or component part(s) to APR Industries Ltd., a Return Authorization (RA) number is required from your **KOZI** dealer. Any shipments received at our facility without an RA number will not be accepted and automatically returned to the sender. The customer is responsible for all shipping costs to and from the factory.

Replace broken or defective components only with approved **KOZ** parts. Any damage occurred by the use of any unauthorized parts will void this warranty.

Contact your dealer for further warranty information.

1. Warranty Registration Card

Please fill out the Warranty Registration Card and mail to the following address:

APR Industries Ltd. c/o Warranty Department 1354 Waverley Street Winnipeg, MB Canada, R3T 0P5 Make sure to attach a <u>COPY</u> of your proof of purchase along with the warranty registration card. Make sure to keep the original copy of your proof of purchase.

You can also register your pellet stove online at www.kozistoves.com/warranty.php.

CUT HERE

W	WARRANTY REGISTRATION CARD
Customer: Name: Addres	Name: Address:
	Postal Code: Country: Dhone Number:
Product:	Type: Stove Insert Fireplace
	Model: KOZI Serial Number: Date Purchased:
Dealer:	Name: Address:

SERIAL NUMBER:		
MODEL/TYPE:		
NOTES:		