

MAGNUM[®] ZC[™]

(MAGNUM ZERO-CLEARANCE WOOD FIREPLACE)

OWNER'S MANUAL

Installation, Operation and Maintenance Instructions

PLEASE READ THIS ENTIRE MANUAL BEFORE INSTALLATION AND USE OF YOUR MAGNUM ZC FIREPLACE. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN PROPERTY DAMAGE, BODILY HARM OR EVEN DEATH.

AMERICAN ENERGY SYSTEMS, INC. GRANTS NO WARRANTY, IMPLIED OR STATED, FOR THE INSTALLATION OR MAINTENANCE OF THE MAGNUM ZC FIREPLACE AND ASSUMES NO RESPONSIBILITY FOR ANY CONSEQUENTIAL DAMAGE(S).

Safety tested by Warnock Hersey to UL 127-1988, CAN/CSA- ULC S610-M93

Certified to EPA Method 28A & 5G3(exempt status)

Tested by Method 5G for emissions, results 3.490 g/hr

This appliance can be installed in all applications except a mobile home installation or a HUD home. Installations into a permanent manufactured home is determined by local building authorities

AMERICAN ENERGY SYSTEMS, INC. – 150 Michigan Street N.E. – HUTCHINSON, MINNESOTA 55350

(320) 587-6565 PHONE – (320) 587-8872 FAX

technical@magnumheat.com – www.magnumheat.com

Rev date 09/21/10



Dear Valued Magnum Customer,

I would like to take this time to thank you personally for the purchase of your Magnum Fireplace. You have purchased a product that has, over the past 32 years, earned its reputation for unmatched quality and efficiency.

The added features of this fireplace will enable you to have years of trouble-free operation. Please read this manual completely through before attempting to install your Magnum ZC fireplace. It will give you step by step instructions for proper installation, operation, and maintenance.

Sincerely,

Mike

Mike Haefner

Owner

American Energy Systems, Inc.

- ✓ **READ THE OPERATIONS SECTION OF THIS MANUAL BEFORE OPERATING YOUR UNIT.**
- ✓ Always unplug the power of the unit before attempting service work.
- ✓ **DO NOT** connect the unit to a chimney serving another appliance.
- ✓ Chimney size 7 or 8 inch listed type 2100' HT, Insulated or Air Cooled Chimney venting can be used.
- ✓ Ashes must be disposed of in a metal container with a tight fitting lid.
- ✓ All minimum clearances to combustibles must be followed.
- ✓ **DO NOT** use a fireplace insert or other products not specified for use with this fireplace.

TABLE OF CONTENTS

OPERATING YOUR MAGNUM ZC	PAGE(S)
FUEL.....	4
FIRST FIRES.....	4
BUILDING A FIRE.....	4
DAMPER / COMBUSTION AIR CONTROLS.....	4-5
ACCELERATED HIGH HEAT OUTPUT.....	5
MEDIUM COMBUSTION.....	5
SLOW COMBUSTION.....	5
REFUELING FOR BEST PERFORMANCE.....	6
SMOKING: CAUSES & TROUBLESHOOTING.....	6-7
IMPORTANT POINTS.....	7
ASHES.....	7
 MAINTAINING YOUR MAGNUM ZC	
CREOSOTE.....	8
CHIMNEY MAINTENANCE.....	8
DEALING WITH A CHIMNEY FIRE.....	8
24K GOLD FINISH DOOR CARE.....	9
DOORS.....	9
DOOR ADJUSTMENT & ASSEMBLY.....	10
HINGE ADJUSTMENT.....	10
GLASS & GASKET REPLACEMENT.....	10
GLASS CARE – REPLACEMENT.....	10
GLASS CARE – CLEANING.....	11
GASKET REPLACEMENT.....	11
 INSTALLATION & OPERATING INSTRUCTIONS	
PARTS REQUIRED.....	12
OPTIONAL PARTS.....	12
REPLACEMENT PARTS.....	12
LOCATING YOUR MAGNUM ZC.....	13
OUTSIDE AIR REQUIREMENTS.....	13
MAGNUM ZC VENTING.....	14
HEARTH EXTENSION REQUIREMENTS / FLOOR PROTECTION.....	15-16
FRAMING, FACING & MANTEL.....	17-18-19
UPPER GRILL EXTENSION INSTALLATION (OPTIONAL).....	20
EXPANDED METAL FACE KIT INSTALLATION (FOR BRICK OR STONE FACING).....	21
DAMPER ROD EXTENSION INSTRUCTIONS.....	22
CHIMNEY INSTALLATION NOTES.....	23-24
ANCHOR PLATE INSTALLATION.....	24-25
FIREPLACE INSTALLATION INSTRUCTIONS / OUTSIDE AIR INSTALLATION.....	26-27
COMPLETING THE FIREPLACE INSTALLATION.....	28
FAN KIT SYSTEM (OPTIONAL).....	29-30
THERMO-SENSOR INSTALLATION (FOR FAN KIT SYSTEM) / ZC-25 GOLD TRIM INSTALL.....	31
 APPENDIX	
SPECIFICATIONS.....	32
CLEARANCES TO COMBUSTIBLES.....	32
FIREBRICK & FIREBRICK BAFFLE.....	33
LAYOUT.....	
TROUBLE SHOOTING GUIDE.....	34-35
WARRANTY INFORMATION.....	36-37

OPERATING YOUR MAGNUM ZC

FUEL

The **MAGNUM ZC** is designed to work best when fueled with seasoned cordwood. Hardwoods are preferred to softwoods since the energy content of wood is relative to its density. Hardwoods will result in a longer burning fire and less frequent refueling. The **MAGNUM ZC** should be fueled with wood cut to 18" (457 mm) or less in length. Moisture content of 15% to 20%, wood seasoned for approximately two (2) years is preferred. Excessively wet wood will be difficult to burn, and will result in lower efficiency, increased creosoting, and deposits on the glass. Excessively dry wood will burn well but will also have higher emissions and shorter burning time.

Do not burn scrap or garbage, treated wood or wood such as driftwood from the ocean which has been exposed to salt or other chemicals. Salt or chemicals can corrode the firebox and chimney. Do not abuse the unit by burning large amounts of paper or cardboard. Christmas tree branches or building construction materials such as pressed wood, plywood, or lumber cannot be used. Intense firing with these may overheat the fireplace, causing damage to the unit or a chimney fire if the chimney is creosoted.

FIRST FIRES

Labels, which may have been applied to the glass, are easily removed before the fireplace is started.

The first 5 or 6 fires should be small fires of short duration (about 30-60 minutes). The first fire should be especially short. This will help cure (dry) the refractory bricks and paint. The first fires may produce slight smoking and smell due to curing of the paint and steel, and any dust accumulated on the fireplace will be burnt off at this time. For this reason the room should be well ventilated for the first few fires.

BUILDING A FIRE

To start a fire, place several crumpled up balls of newspaper in the firebox. Place small dry pieces of kindling on top of the paper, crisscrossing the kindling so that there are air spaces in between. Place larger pieces of kindling on top of the pile. Open the damper and combustion air controls fully and light the newspaper. Once the newspaper and kindling are well ignited cordwood can be added. The unit will burn best with 2-4 pieces of cordwood spaced 1" (25mm) to 2" (50 mm) apart allowing air to get under the fuel. Crisscrossing, or arranging the fuel so that air can get underneath, will help the fire to get started easily. The unit should be operated with the damper and combustion air controls fully open long enough to get the cordwood well ignited. The airtight doors should be left open approximately 1" until the fire is well established (usually 30-45 minutes). This will help keep the glass clean.

DAMPER / COMBUSITON AIR CONTROLS

When starting a fire, open the damper and combustion air controls to the full open position (damper handle straight up and ZC-60 combustion air knob pulled out). After the fire has had sufficient time to ignite, close damper control to desired setting, approximately 2/3 to fully closed) Normally the combustion air control will be left fully open when the fire is burning, and closed when you are no longer using the unit. If you have excessive chimney draft or want the unit to burn slower adjust the control up to ½ closed.

NOTE: When you partially or fully close the combustion air-control you will get additional buildup of soot on the glass. When the unit is not in operation close the damper and the combustion air controls all the way to minimize cold air penetration (frosting) of the unit glass when it is cold.

Always open the damper control fully open before opening the door, to minimize the possibility of back drafting (smoke) coming into the room. Allow approximately 10 seconds of time before opening the doors.

ACCELERATED COMBUSTION (High Heat Output)

The maximum heat output for the **MAGNUM ZC** is achieved by burning with the doors closed and the damper and combustion air controls fully opened. By this method, the **MAGNUM ZC** can produce 85,000+ BTU's of heat per hour. It will be necessary to reload with wood every one to two hours. This is the least efficient method of burning the **MAGNUM ZC** and must not be done for long periods of time.

Use caution when firing with the damper control wide open. Only burn hard cordwood in this manner. Never burn scrap wood or softwood in this manner. Damage to the firebox or chimney fires could occur.

Do not overfill with wood in an attempt to prolong reloading time. Too much wood may cause an over fire condition damaging the fireplace. Never load over 3-4 pieces of wood at a time on this setting.

MEDIUM COMBUSTION

This is the recommended way to operate your **MAGNUM ZC** to achieve the highest level of efficiency and the least amount of creosote on the glass and in the chimney.

The damper control should be approximately 2/3 closed and the combustion air 2/3 to fully open. The precise setting will depend on many factors, including chimney height, house air tightness and the moisture content of the wood. Three (3) to four (4) medium size pieces of split wood (ranging from 4" to 8" in diameter should be burning on a bed of hot coals. The heat output will be approximately 65,000 BTU per hour and the loading time will be 3 to 4 hours. Softwoods may be burned using this method but burn time will be substantially reduced.

SLOW COMBUSTION

Place four (4) to six (6) pieces of split wood six (6) inches or greater in diameter on top of a hot bed of coals. Close the damper control 2/3 to fully closed and adjust the combustion air control 2/3 closed. This method of burning should be used only after operating the **MAGNUM ZC** with the damper control open to produce a hot fire (see Refueling For Best Performance). Creosote from the fire may accumulate on the glass doors unless the firebox is hot.

Slow combustion can be used at night in order to reduce the heat output and to prolong the burn. Although active burning will appear to cease after 4 to 6 hours, a bed of hot coals will continue to burn and produce heat. These coals will remain hot throughout the night and will facilitate re-lighting the fire the next morning.

This method of operation will accelerate creosote accumulation in the chimney. Therefore, it will be necessary to inspect and clean the chimney more frequently.

RE-FUELING FOR BEST PERFORMANCE

The **MAGNUM ZC** will operate best if attention is given to operating the unit with the damper open for a short period of time after refueling in order to bring the fuel load as well as the fireplace/chimney system, up to its optimum operating temperature. By operating the **MAGNUM ZC** with a hot start after refueling, the **MAGNUM ZC** can achieve the burn rates of slow combustion, but with the temperature and performance of medium combustion. Combustion efficiency is relative to firebox temperature, and therefore ensuring that there is sufficient temperature in the firebox will improve performance. Once the firebox is hot enough so that flames reach beyond the baffle, the damper can be closed to the minimum setting. If the flames do not continue beyond the edge of the baffle, the air control should be reopened to establish a hotter fire. The benefit of this technique will be cleaner glass, less creosoting, greater efficiency, and the most pleasing fire for your enjoyment.

SMOKING: Causes and troubleshooting

To reduce the likelihood of smoking when opening the doors, open the damper before opening the doors. Your fireplace has been designed and tested to provide smoke free operation. Occasionally there may be a small amount of smoking upon lighting the fire, until the chimney heats up, but this should not continue. If the fireplace continues to smoke it is probably due to one or more of the following reasons:

1. **THE DOORS ARE PARTIALLY OPEN**
 - ✓ Open both doors fully when opening them.
2. **NOT ENOUGH REPLACEMENT AIR (HOUSE DEPRESSURIZATION)**
 - ✓ As the fire burns, air goes up the chimney. This air must be replaced through leakage into the house, or through the outside air duct (if installed). When operating the **MAGNUM ZC**, the outside air supply should be open. Open a nearby window temporarily to check the adequacy of the replacement air supply. Correct depressurization problem by installing make-up air.
3. **VENTILATOR FAN OPERATING (HOUSE DEPRESSURIZATION)**
 - ✓ These fans draw air out of the house and may actually draw air down the chimney. Open a nearby window and turn off all fans to determine if this is the cause of the problem.
4. **TOO LARGE OF A FIRE**
 - ✓ Do not burn more than 3"-4" medium (4" diameter) (100 mm) size logs at a time.
5. **WET WOOD**
 - ✓ Wet or tarred wood will smolder and smoke instead of burn properly.
6. **DIRTY OR BLOCKED CHIMNEY**
 - ✓ Check to make sure the chimney is clear and reasonably clean.
7. **CHIMNEY HEIGHT NOT SUFFICIENT**
 - ✓ The chimney must extend at least 3' (915 mm) above its point of contact with the roof and at least 2' (610 mm) higher than any roof or wall within 10' (3 m) of it. When installed with offsets, additional height is required to maintain the minimum height and to compensate for the decrease in draft. Additional height will increase draft and will decrease the tendency to smoke if caused by low draft. Tall buildings, trees, and surrounding hills will cause down drafts resulting in back drafting (smoking) when opening the fireplace doors.

8. **NEGATIVE PRESSURE IN THE HOUSE**

- ✓ With no fire, there should be sufficient draft to exhaust cigarette smoke or other smoke introduced under the baffle. If the chimney has been installed properly and is operating properly, then the smoke should go up the flue. Chimneys that have an installation deficiency, or one or more of the above problems, may be drawing cold air down the flue and into the room. These chimneys will often smoke temporarily on startup until the chimney is heated up. Closing upstairs windows and opening a nearby window will help to overcome smoking caused by house depressurization.

IMPORTANT POINTS:

- Use Solid Fuel Only
- ✓ **Do not** block the hot air vents or air inlet to the fireplace, as this will cause the fireplace to overheat.
- ✓ **Never** start a fire using gasoline, kerosene, charcoal lighter fluid, or any other combustible liquid.
- ✓ **Do not** burn coal. The sulfur in coal will corrode the firebox.
- ✓ **Do not** burn driftwood that has been in the ocean or salt water. The salt will corrode the firebox and chimney.
- ✓ **Do not** operate the unit with the doors partially open (except on startup), or with one door open, since this may cause smoke to be drawn into the room. (Doors must be fully open or fully closed.)
- ✓ **Do not** burn wood in the area in front of the log guard or a log grate (if used).
- ✓ **Do not** abuse the unit by over firing or by burning paper, cardboard or construction material such as pressed wood, plywood, or lumber.
- ✓ **Do not** allow the wood to smolder or burn without flame, since this will produce excessive creosote and cause the glass to become dirty.
- ✓ **Warning:** Never use substitute glass materials. If the glass needs replacement, order glass #AR-1400 from your **MAGNUM ZC** dealer.
- ✓ **Warning:** Do not slam doors shut – Do not hit doors with logs, this can cause serious damage to doors and/or break the high temperature glass.
- ✓ **Keep small children away from fireplace.** Front surfaces are extremely hot.
- ✓ **Warning:** Do not clean door glass while hot. Wait for unit to cool down before servicing or cleaning.

ASHES

Remove ashes only when the fire is out and the ashes are cold. Place the ashes in a metal container with a tight fitting lid. Do not put ashes in a cardboard box, and do not place the container on or near combustible material. The ashes remain hot for days and can start a fire. Do not leave the ashes in the house as they give off carbon monoxide and other toxic gases.

Stirring the ashes in the firebox occasionally when loading wood will cause them to burn thoroughly and reduce the need for removing the ashes.

MAINTAINING YOUR MAGNUM ZC

CREOSOTE

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form a black deposit, called creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire. If the creosote accumulation is large, a creosote fire in the chimney can damage the chimney and overheat the surrounding wood framing. Creosote formation in a chimney can be minimized by making small hot fires rather than slow burning, smoldering fires, and by proper refueling techniques. The **MAGNUM ZC** is designed and tested to produce a low amount of emissions when operated correctly.

CHIMNEY MAINTENANCE

Regular chimney inspections and maintenance combined with proper operation will prevent chimney fires. Keep your chimney clean. Do not allow more than 1/16" creosote buildup in your chimney. The amount of creosote will depend on variables such as frequency of use and type of fire. We recommend that you:

- ✓ Initially inspect the chimney system every month or two. From this you will learn how often it will be necessary to clean your chimney.
- ✓ Have your chimney cleaned by a qualified chimney sweep. If you wish to clean it yourself, we recommend using a stiff plastic or non-metallic brush. If a metal brush is used, its size should be slightly smaller than the flue to avoid damaging the chimney. Do not use a brush that will scratch the stainless steel interior of the chimney. Do not expect chemical cleaners to keep your chimney clean.
- ✓ The rain cap can be removed for inspection and/or cleaning of the chimney.

DEALING WITH A CHIMNEY FIRE

Regular chimney maintenance and inspection combined with proper operation can prevent chimney fires.

If you have a chimney fire, follow these steps:

- 1) Close the fireplace doors and damper / combustion air dampers.
- 2) Alert your family of the possible danger.
- 3) Alert your fire department.
- 4) If possible, use a dry chemical fire extinguisher, baking soda or sand to control the fire. Do not use water as it may cause a dangerous steam explosion.
- 5) Check outside to ensure that sparks and hot embers coming out of the chimney are not igniting the roof.
- 6) Do not use the fireplace again until your chimney and fireplace has been inspected by a qualified chimney sweep or a Fire Department Inspector.

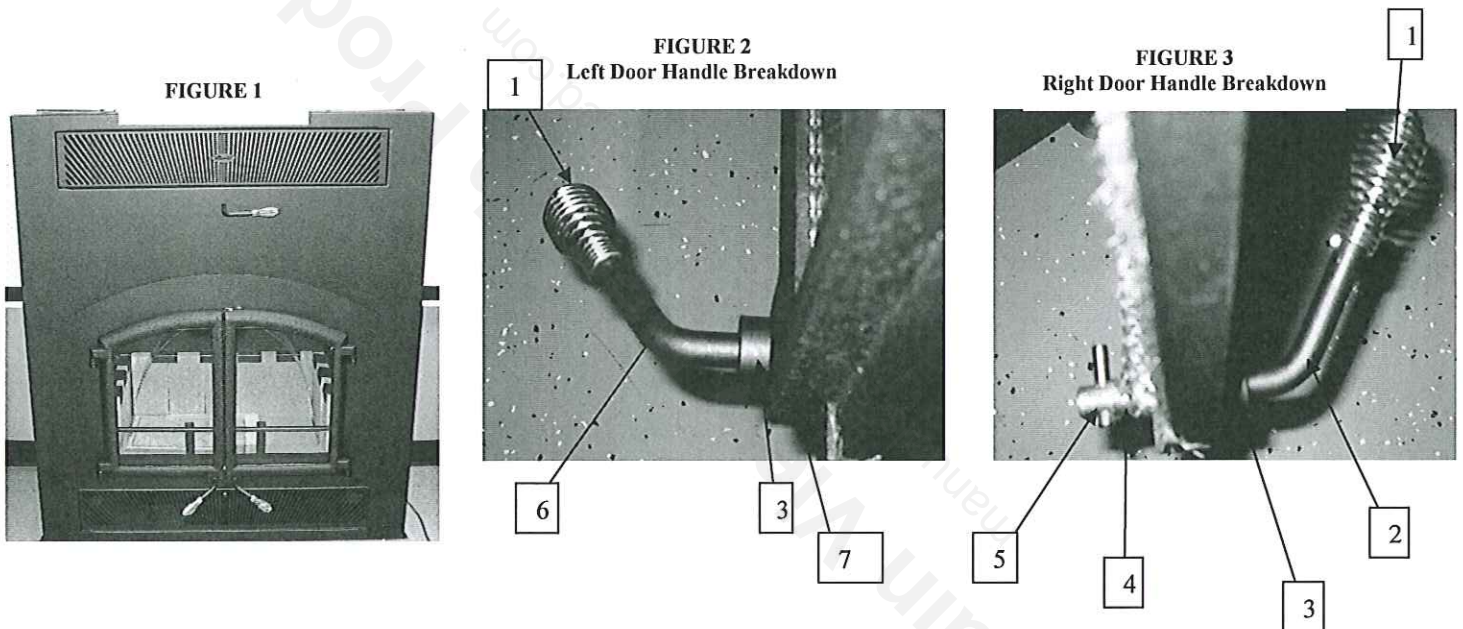
24K GOLD FINISH DOOR CARE (optional)

Use soap and water mixture and a soft cloth to clean the 24K gold surface. Do not use abrasives such as steel wool or steel pads for they will scratch the gold finish. Do not use harsh polishing agents as they will wear off the gold surface.

DOORS (It is not recommended to interchange doors once they are installed on your unit)

The doors come mounted and adjusted on the **MAGNUM ZC** fireplace. If you are changing to a different finish option there may have to be adjustments made to the door hinges and latches.

Keep the door latches and hinges lubricated with all-purpose grease such as WD-40, at least once a year. To adjust the tightness of the door latch follow the instructions listed below. If the doors are out of alignment, you will have to take the doors off of the hinges and tap the hinges in or out to align the doors straight with each other. Be sure to place the door pin in the hinge hole before tapping on the hinge to keep the hole from becoming out of round.



FIREPLACE DOOR INSTALLATION INSTRUCTIONS

PARTS LIST

1) Spring Handles	R-116
2) Steel Shank	127
3) Steel Collar	2X-568
4) Spring	36100G
5) Expand Pin	14
6) Steel Shank	126
7) Set Screw	1420
8) Allen Wrench	1/8"

COMPLETE DOOR ASSEMBLY

- | | |
|------------------------|-----------|
| 1) Black Doors | ACI-B-A |
| 2) 24 Karat Gold Doors | ACI-24K-A |
| 3) Nickel Doors | ACI-NKL-A |
- Only these door assemblies can be used on the **Magnum ZC** fireplace.

STOVE DOOR INSTALLATION

If the door is removed for any reason, care must be taken in reinstalling the door to ensure proper alignment and fit. Setting the door is quite simple. Ensure the door is in the fully open position. Once done, align the female portion of the door hinge with the male portion of the stove hinge. Gently lower the door hinges over the stove hinge pin. Once the door hinges have been set, the door can be closed to check for proper fit. To remove the door, simply lift up on the door from the stove hinges. If the door fit is not satisfactory, the homeowner can adjust the door using the hinge screws, refer to FIGURE 3A.

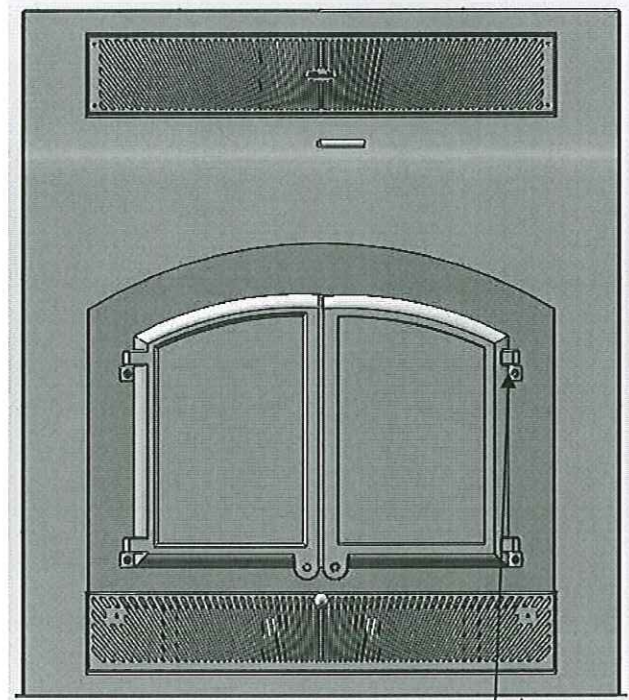
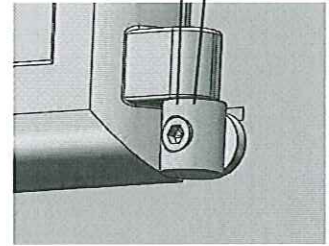


FIGURE 3A



RIGHT HANDLE ASSEMBLY: Place the #3 steel collar over the #2 steel shank and place the steel shank through the ½” hole located on the bottom of the right door. Then place the #4 spring over the ½” shaft sliding it against the cast iron door. Then while supporting the steel shank underneath with a hammer or such, install the #5 expand pin. Note that the #5 expand pin must be installed with the pin facing so that when the door is closed the spring handle will be facing to the right. SEE THE ASSEMBLY IN FIGURE 1 & 3. To adjust the right door, simply pull on the steel shank to give it a little spring tension and then tighten the set screw on the steel collar using the #9 Allen wrench provided. Adjust the door so that the handle pulls the door up so that the gasket seals against the doorframe. *DO NOT OVER TIGHTEN THE DOOR AS IT WILL TWIST THE CAST FRAME AND COULD CAUSE GLASS BREAKAGE.*

LEFT HANDLE ASSEMBLY: Place the #3 steel collar over the #6 steel shank and place in the ½” hole located on the bottom of the right door. Next, place the #7 set screw in the threaded hole directly below the handle and turn into place. Align the #6 steel shank so that it is at the same angle as the left handle, facing left. Then tighten the setscrew with the #9 Allen wrenches provided. Finally, slide the #3 steel collar up against the cast and tighten. (SEE FIGURE 2)

NOTE: The spring handles are installed by twisting them onto the ½” steel shank like you would screw on a nut. Apply a slight amount of pressure as you turn the spring handles into place.

GLASS & GASKET REPLACEMENT

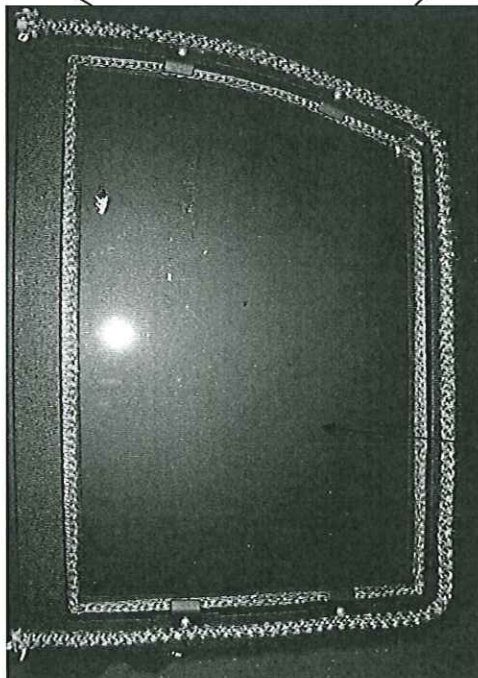
To remove the glass, take the door off of the frame by opening the door and lifting the cast iron door up off of the hinges. Make sure that the door is cool before taking off of the unit. Move the door back and forth as you lift. The hinge pins are snug. Lay the door on a newspaper or cloth to keep the soot and dirt from getting on the floor. Next, using a Phillips #2 screwdriver, loosen the four-(4) screws that hold the clips in place. (SEE FIGURE 4) Make sure not to bind the screwdriver against the glass. Remove the glass that is broken and clean the area that the glass sits in. The replacement glass will have new gasketing installed from the factory. Make sure that all of the old gasketing is removed from the door.

Carefully place the new glass in the door channel and replace the clips that hold the glass in place. When installing the screws make sure that the clips are tightened evenly. Do not tighten the screws on one end and then the other. The clips should put even pressure against the glass so it will not move but is not binding. When you tighten the screws, remember that they are easily stripped and should only be tightened enough to hold the clips firmly. Make sure that you do not bind the screwdriver against the glass. Finally, be careful not to drop the cast frame as you align it with the hinges and slip it into place.

GLASS CARE - REPLACEMENT

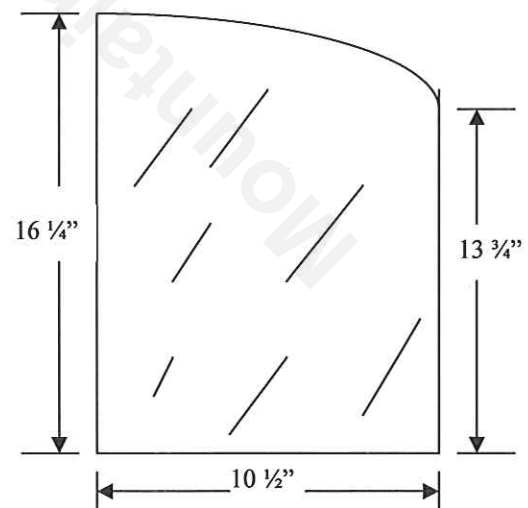
The glass used for the **MAGNUM ZC** doors is a high temperature ceramic glass. If the glass breaks, it must be replaced with factory replacement ceramic glass (SEE FIGURE 5 FOR DIMENSIONS). Tempered or ordinary glass will not withstand the high temperatures of the **MAGNUM ZC**. Replacement glass should be purchased from your dealer or the factory. Do not operate the unit with cracked or broken glass.

CLIP (4) FIGURE 4 10-24 SCREW



GASKET
COMES
INSTALLED
ON GLASS

FIGURE 5



GLASS CARE – CLEANING

The **MAGNUM ZC** has an air wash system designed to keep the glass fairly clean under normal conditions. A small amount of soot may build up on the glass area; especially if the doors are not sealed tightly (see door adjustments). Under low fire conditions (combustion damper closed) the glass will tend to get dirty unless the fuel, firebox and glass are maintained at hot temperatures (see refueling).

To clean the glass, there are a number of specially designed cleaners. Your authorized **MAGNUM ZC** Dealer can recommend a suitable cleaner which is available in your area. Regular household glass cleaners will not clean creosote. Do not use abrasives such as steel pads, steel wool or oven cleaner as they will scratch the glass.

TIP: Amway® brand cream glass cleaner works great.

GASKET REPLACEMENT

Remove the doors from the unit and lay them gasket side up on a clean soft surface. To replace the gasket, first remove the entire old gasket and gasket cement. Make sure that the surface is totally clean before applying new cement or adhesion problems may result. Apply gasket cement to the gasket channel (app. 1/8" bead), and install the new gasket, available from your **MAGNUM ZC** Dealer.

Gasket lengths are:

- | | | | |
|--------------------------------|---------|--------|--|
| ■ Gasket around glass (R-105) | 52 long | Qty: 2 | 1/8" x 3/4" window gasket |
| ■ Gasket on door frame (R-106) | 48 long | Qty: 2 | 3/8" med. density graphite coated rope |

INSTALLATION AND OPERATING INSTRUCTIONS

Read these instructions and keep them for future reference. Before installing your fireplace, consult your local building authority to obtain a building permit as well as information on the specific requirements in your area. Install the fireplace only as described in these instructions and using only approved components. Failure to follow these instructions will void the certification and the warranty of the fireplace, and may result in an unsafe installation. The **MagnuM ZC** fireplace has been approved for use with a properly listed gas log lighter. The factory does not supply the gas log lighter. Failure to follow these instructions will void the certification and the warranty of the fireplace, and may result in an unsafe installation.

PARTS REQUIRED:

- ✓ Fireplace Model **MAGNUM ZC**
- ✓ 8" or 7" diameter listed 2100 degree type HT insulated or air-cooled chimney system
- ✓ Anchor plate (supplied with chimney system)
- ✓ 4" outside combustion air hookup (supplied by dealer)
- ✓ ZC-65 (8" to 7") chimney adapter if using 7" chimney system

OPTIONAL ACCESSORIES:

- ✓ Fan Kit
- ✓ Arched Lintel Iron
- ✓ Grill Extension
- ✓ Gold Upper Grill
- ✓ Gold Lower Grill
- ✓ Nickel Upper Grill
- ✓ Nickel Lower Grill
- ✓ Gold Doors
- ✓ Nickel Doors

NOTE: The **MAGNUM ZC** can only be installed with 8" or 7" diameter listed type 2100' HT insulated or air-cooled chimney. It is strongly recommended to use 8" diameter chimney whenever possible.

If you are not using our UGA-B-ZC upper grill you must have a minimum of 125 square inches of open area to allow the heat to exit the unit. If you are using remote ducting you must have a minimum of 100 square inches of open area in the front heat outlet of the unit.

The MAGNUM ZC is not tested for use with a masonry chimney or with a chimney liner.

REPLACEMENT PARTS:

- ✓ R-102 -Arched Ceramic 1400 Degree Replacement Glass (Specify left or right)
- ✓ R-105 (per door) -Thermo-Tape Gasketing for glass seal
- ✓ R-106 (per door) -Thermo-Cord Gasketing for door seal (includes gasket cement)
- ✓ R-116 - Spring Door Handles (each door)
- ✓ R-120 -Right Handle Kit (Steel)
- ✓ R-121 -Left Handle Kit (Steel)
- ✓ R-145 -Glass hold down clip (each)
- ✓ R-146 -Glass hold down clip screw (each)

Listed: Warnock Hersey February 1994 Test Date

Standards: UL 127 - UL 1482 - ULC S627 - ULC S610

LOCATING YOUR MAGNUM ZC

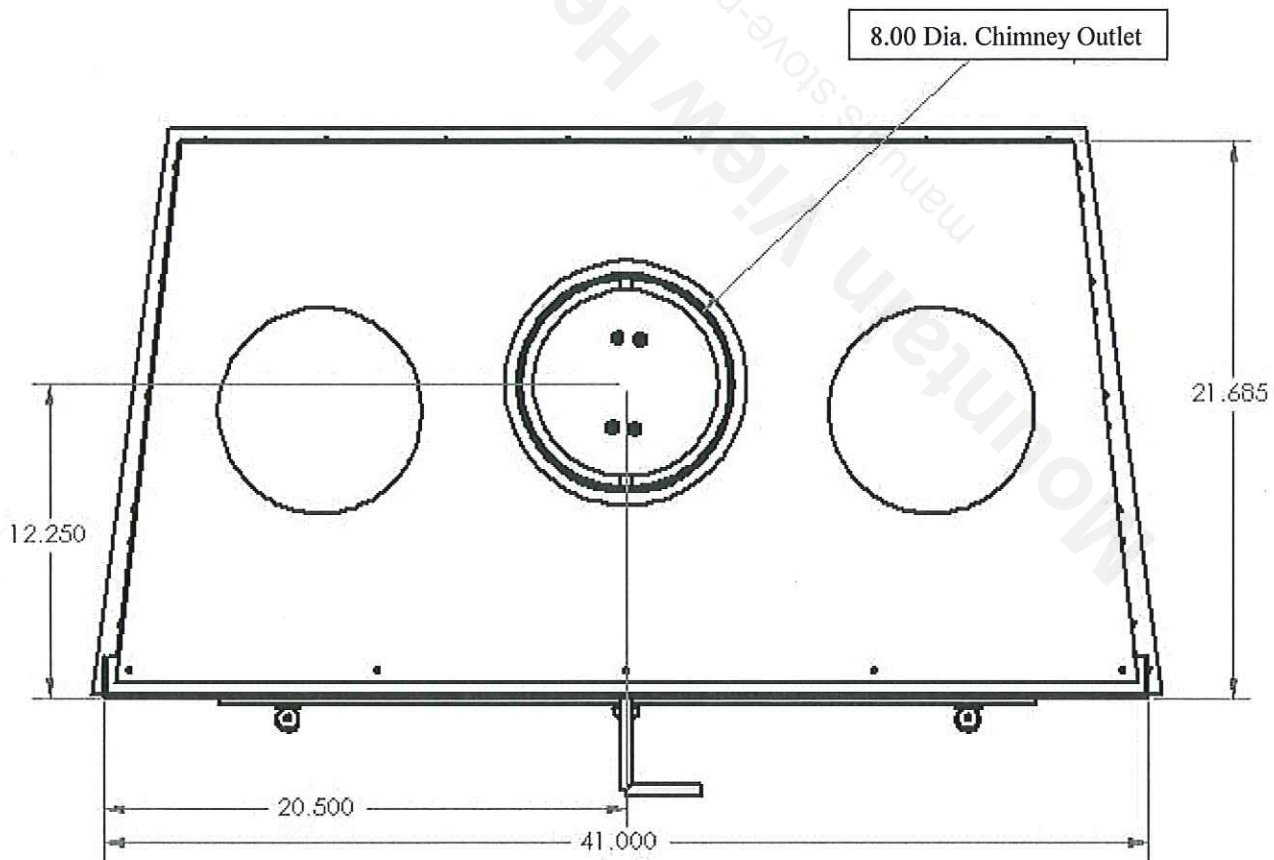
- ✓ The best location for your fireplace is determined by considering the location of windows, doors, and the traffic flow in the room where the fireplace is located, allowing space in front of the unit for the hearth extension and the mantel, and taking into consideration the location of the hot air ducts, outside air kit (if so equipped), and chimney. If possible, you should choose a location where the chimney will pass through the house envelope (interior walls).
- ✓ Usually no additional floor support is needed for the fireplace. The adequacy of the floor can be checked by first estimating the weight of the fireplace system. Weights are given in the appendix. Next, measure the area occupied by the system. This will normally be 42" X 23" (1067 X 584 mm) for the fireplace. Note the floor construction as to the sizes and type of flooring and joists, and then consult your local building code to determine if additional support is needed. It is your responsibility to determine the weight load for additional facing materials such as brick or rock.
- ✓ The **MAGNUM ZC** can be installed above the floor level on a base, (see Hearth Extension Requirements) provided that there is a minimum of 7' (2135 mm) measured from floor to the ceiling. This allows adequate room for venting and ductwork.
- ✓ If you are installing the fireplace on an exterior wall, the wall must be insulated the same as the other walls in the home. If this is not done there will be excessive cold air transfer into the home.

OUTSIDE AIR REQUIREMENTS

During operation, the fireplace requires air for combustion and will draw air out of the house. It may starve other fuel burning appliances such as gas or oil furnaces. As well, exhaust fans and fan driven appliances may compete for air, causing a negative pressure in the house and resulting in smoke entering the home from the appliance. This situation is aggravated in modern airtight houses. To overcome this potential problem, you must install an Outside Air Kit with the **MAGNUM ZC**. The kit is mandatory in most areas. Check with your local building authority for requirements in your area. *The outside air kit must be installed according to the following guidelines:*

- ✓ The maximum length of duct is 25' (6.1 m). Duct length should be kept to a minimum. If duct length is over 10' increase the size to 6". Do not have over 3 elbows.
- ✓ The air intake vent must not be installed more than 7' (2135 mm) above the base of the appliance.
- ✓ The fresh air must come from outside the house. It must not draw air from the attic or basement.
- ✓ Locate the outside vent where it will be well away from automobile exhaust fumes, gas meters, or other vents.
- ✓ The air intake vent should be installed where it is not likely to be blocked by snow or exposed to extreme wind.
- ✓ The duct and vent may be installed above or below floor level.
- ✓ Use only factory approved MAGNUM ZC components.
- ✓ Cannot terminate in an attic or crawl space.

Secure all connections with screws to prevent them from coming apart and leaking cold air. All piping should be insulated.



Front of unit

HEARTH EXTENSION REQUIREMENTS

The **MAGNUM ZC** can be installed directly on a combustible or wood floor but we strongly recommend placing a 3/8" thick rock board underneath the unit for added protection. HOWEVER, the floor of the hearth extension (the area in front of the unit) must be protected from sparks and heat by a non-combustible hearth extension. The minimum size of the protected area is 40" wide X 18" deep (1016 X 458 mm) extending in front of the loading door (SEE FIGURE 6). The **MAGNUM ZC** is certified for use with either of the following installations:

- ✓ When installing the **MAGNUM ZC** and the hearth extension directly on a combustible floor, it is REQUIRED that the hearth extension have an R value of 2.2 (3/8" rock board or mineral wool board)

OR

- ✓ If installing on a raised base or raised hearth, a "z" shaped piece of metal is used to join the underside of the fireplace to the hearth extension (SEE FIGURE 7).
- ✓ Always install the hearth extension at least 3/4" under the **MAGNUM ZC** fireplace.
- ✓ If hearth extension is equal or greater than 8" high and equal or greater than 16" deep, area in front does not need protection.

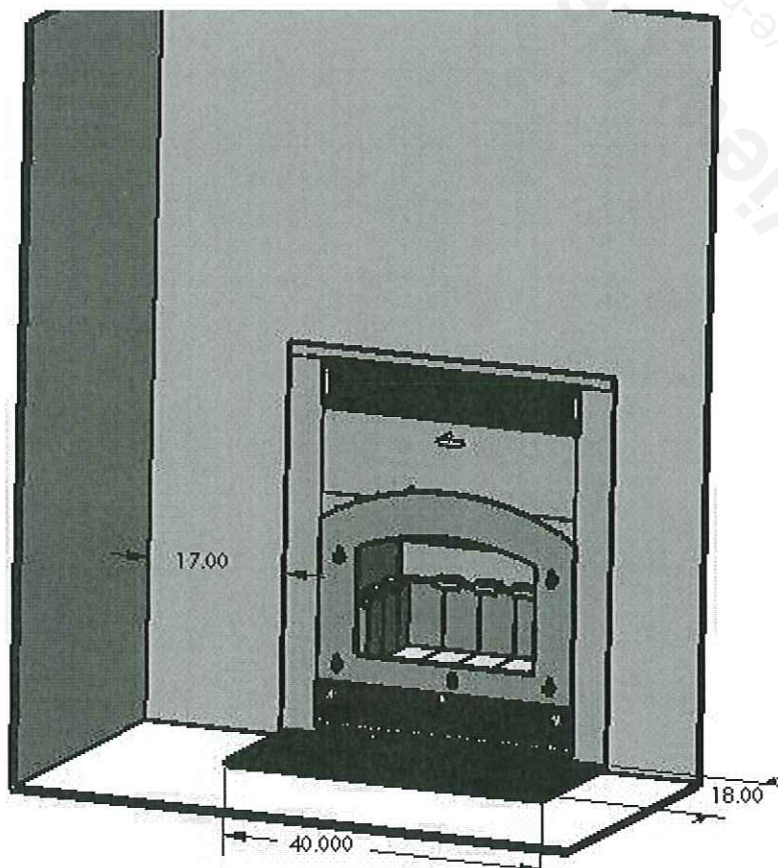
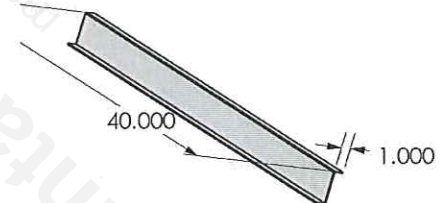


FIGURE 7



HOW TO DETERMINE IF FLOOR PROTECTION MATERIALS ARE ACCEPTABLE

- ✓ All floor protection materials must be non-combustible (i.e., metals, brick, stone, mineral fiberboard, etc.). Any organic materials (i.e., plastics, wood, paper products, etc.) are combustible and must not be used.
- ✓ The floor protector specified may include some form of thermal designation such as R-value (thermal resistance), or K-factor (thermal conductivity), or C-factor (thermal conductance). **3/8" thick rock board or mineral wool board meets these specifications.**

The technical means of determining if a proposed alternate floor protector meets requirements listed in the appliance manual is to follow this procedure:

- a) Convert specification to R-value:
 - R-value given – no conversion needed.
 - K-value is given with a required thickness (T) in inches:

$$R = 1/K \times T \quad (1)$$
 - C-value is given:

$$R = 1/C \quad (2)$$
- b) Determine the R-value of the proposed alternate floor protector.
 - Use the formula in step (a) to convert values not expressed as "R."
 - For multiple layers, add R-values of each layer to determine overall R-value.
- c) If the overall R-value of the system is greater than the R-value of the specified floor protector, the alternate is acceptable.

EXAMPLE:

The specified floor protector should be 3/4 inch thick material with a K-value of .84. The proposed alternate is 4" brick with a C-value of 1.25 over 1/8" mineral board with a K-value of .29.

Step (a): Use formula (1) to convert specification to R-value. $R = 1/K \times T = 1/.84 \times .75 = .893$

Step (b): Calculate R of proposed system.
 4" brick of C = 1.25
 $R_{brick} = 1/C = 1/1.25 = .80$
 1/8" mineral board of K = .29
 $R_{min.bd.} = 1/.29 \times .125 = .431$
 Total R = $R_{brick} + R_{mineral\ board} = .8 + .431 = 1.231$

$\text{Thermal Conductance} = \frac{C = \text{Btu}}{(\text{hr}) (\text{ft}^2) (\text{F})}$
$\text{Thermal Conductivity} = \frac{k = (\text{Btu}) (\text{in})}{(\text{hr}) (\text{ft}^2) (\text{F})}$
or
$\frac{\text{Btu}}{(\text{hr}) (\text{ft}) (\text{F})}$
$\text{Thermal Resistance} = \frac{R = (\text{ft}^2) (\text{hr}) (\text{F})}{\text{Btu}}$

Step (c): Compare proposed system of R of 1.231 to specified R of .893. Since proposed system R is greater than required, the system is acceptable.

Simply put, 3/8" thick rock board or mineral wool board will meet these specifications.

FRAMING, FACING AND MANTEL

The construction of the framing, facing, and mantel must be in accordance with these guidelines and illustrations.

FRAMING

- ✓ Frame the fireplace using 2" X 3" (50 X 75 mm) or heavier lumber.
- ✓ **WARNING:** Combustible material cannot be placed behind the top standoffs of the fireplace. This area must remain empty for a height of 7' (2135 mm) measured from the base of the appliance. Frame the fireplace with vertical studs at the sides of the fireplace running from floor to ceiling (SEE FIGURE 8). The enclosure can be framed prior to installation, allowing 42" (1067 mm) wide and 23" (584 mm) deep (SEE FIGURE 8). If combustible facing is to be used, position the studs back from the front edge of the fireplace and space the thickness of the facing material in order that the facing can be installed flush with the fireplace facing. Combustible materials must not touch the unit.
- ✓ Frame headers between the vertical studs only as follows:
 - ✓ Place 2" X 3" (50 X 75 mm) or 2" X 4" (50 X 100 mm) headers (SEE FIGURE 8) between the studs only along the upper part of the front, side and back faces. Do not put wood or any combustible material within the area behind the standoffs on top of the unit. This area is for venting and ductwork.
 - ✓ Place headers only as required to support the facing and mantel, and place all headers on edge.

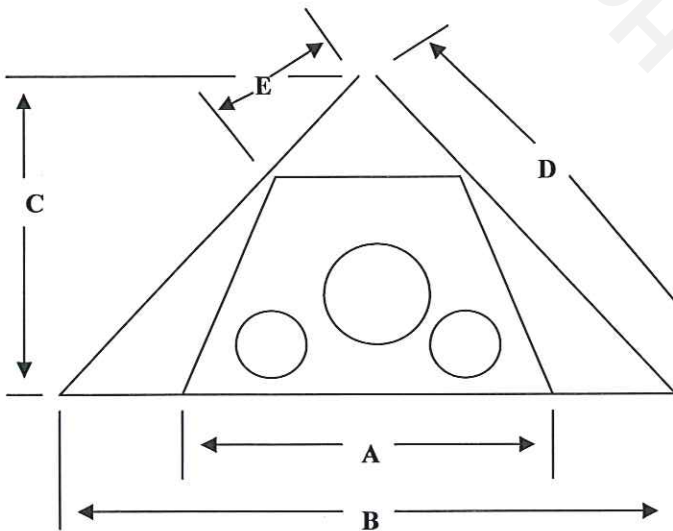


FIGURE 9

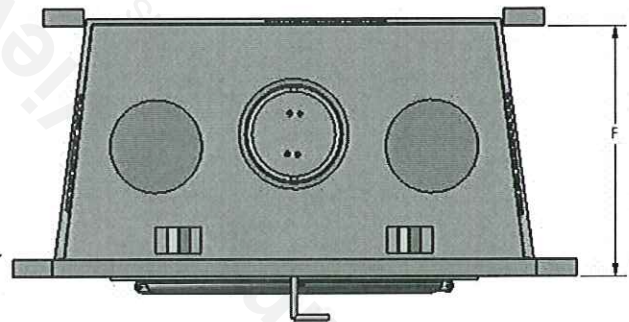


FIGURE 10

	A	B	C	D	E	F
INCHES	41	83	41 1/2	59	26	22
MILLIMETERS	1025	2075	1037.5	1475	650	550

FRAMING, FACING & MANTEL, CON'T

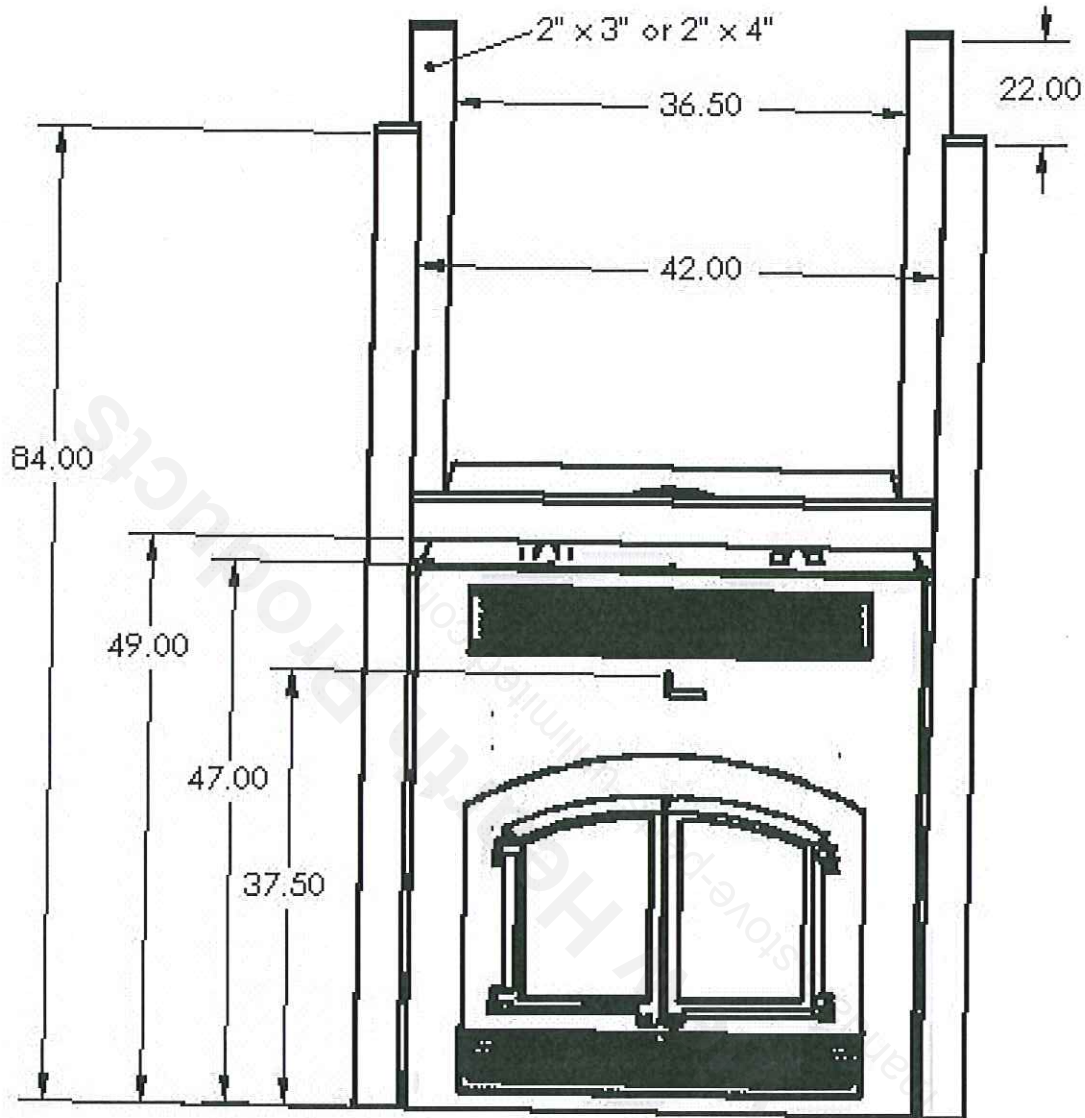


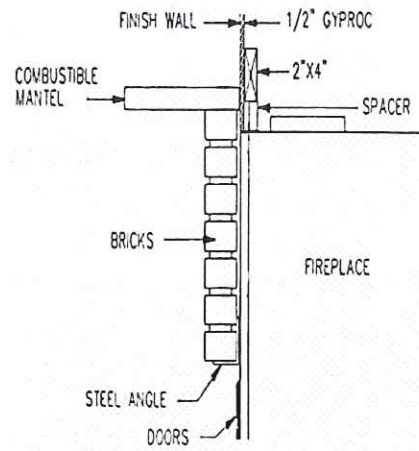
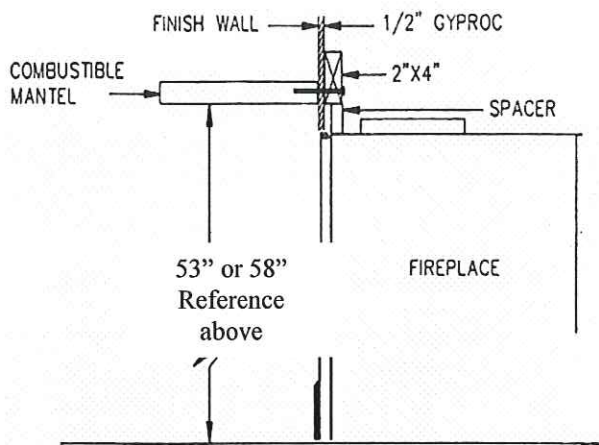
FIGURE 8

FACING

- ✓ Combustible material must be installed flush with the fireplace. It may not project in front of and on the fireplace (i.e. the steel faceplate of the **MAGNUM ZC**) (SEE FIGURE 11).
- ✓ Non-combustible materials such as brick, stone or ceramic tile may project in front of and onto the fireplace facing as long as proper facing attaching materials are used (SEE FIGURE 12).
- ✓ Do not block the upper grill at the fireplace front with facing material.

MANTEL

The mantel must be installed at least 58" (1450 mm) (no ducting) or 53" (1325mm) (both ducts) above the base of the fireplace and at least 6" (152 mm) away from any hot air outlet framing.



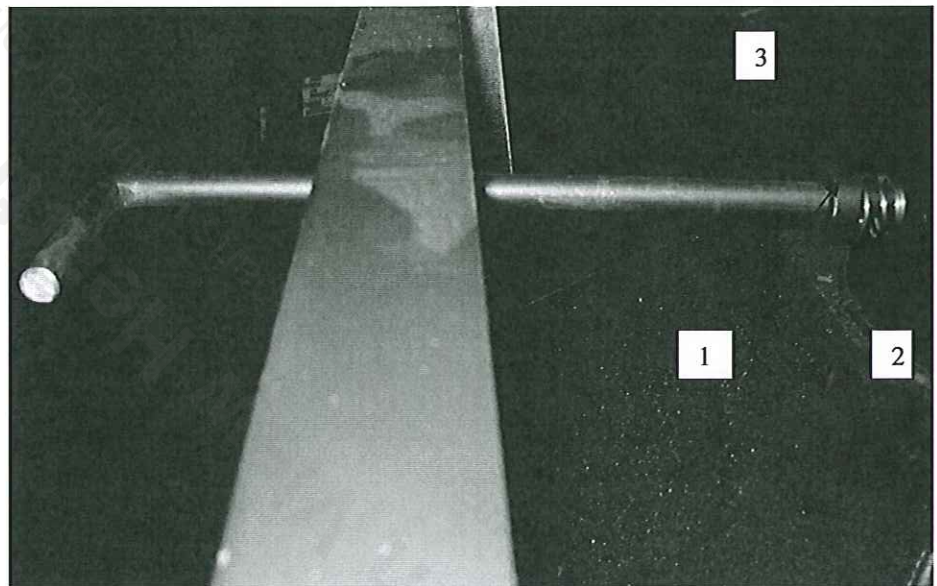
DAMPER ROD EX1 FIGURE 11 **ACTIONS**
 (When using brick or stone on the face of the **Magnum ZC**)

FIGURE 12

The **Magnum ZC** comes equipped to handle two types of installations:

- 1) The normal installation where there is no brick or stone covering the face of the unit.
- 2) The optional installation where there is brick or stone covering the face of the unit.

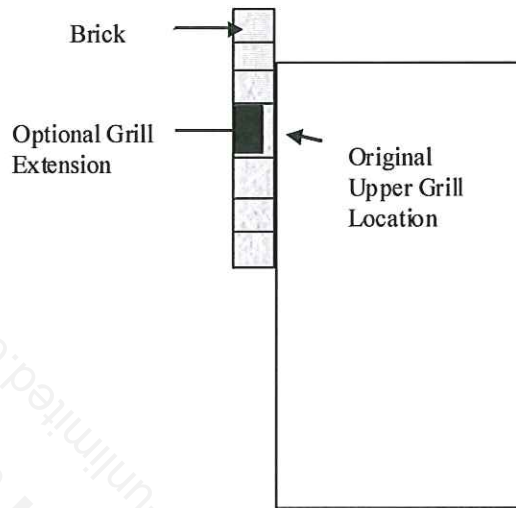
The unit comes with the damper control rod positioned for installation #1. To change the rod location for option #2 follow the simple instructions below (SEE FIGURE 14).



- 1) Open the upper grill and loosen the set collar #1. Reach down through the top of the 8" flue and loosen the two U-bolts that hold the damper plate in. (Note the location and direction of the damper rod handle. It should be facing upward when the damper is open.)
- 2) Slide the damper rod through the face toward the front of the unit approximately 2-2 1/2". This will move the rod out far enough to accommodate the thickness of the brick that goes on the face of the unit. Be careful not to move the rod too far. There has to be 1/2" sticking through the back hole of the unit.
- 3) Reverse the procedure tightening the two U-bolts and the set collar. Be sure the spring has adequate tension on it (#2) so that the damper will stay in place when the rod is moved from different positions.

If you have a particular installation that requires something different than what is provided contact your local **Magnum ZC** dealer and he will order you what is needed.

ZC-37 Top Grill Extension Installation Guidelines



When you are using brick on the face of the Magnum ZC you can do one of two options.

1. Leave the upper grill in its present location and leave a opening in the brick face the size of the grill to allow proper air flow or
2. Install the optional ZC-37 Grill extension in the brick.

To install the ZC-37 take the upper grill out of the unit by lifting straight up and pulling the grill toward you.

As you build your brick face up the level of the grill opening place the grill extension in the brick face and complete your brick face install. Make sure to leave openings in the brick for the pins on the upper grill. You will have to be able to lift the grill up and place it into the lower holes in the ZC-37 extension and then lower the grill into place.

Make sure to have the ZC-37 grill extension in line with the original grill opening so that the air-flow will not be restricted.

Seal the area around the grill opening so that hot air does not go up between the unit and the brick face.

EXPANDED METAL FACE KIT INSTALLATION
(FOR STONE, BRICK & TILE FACING) Mesh Kit (ZC-75)

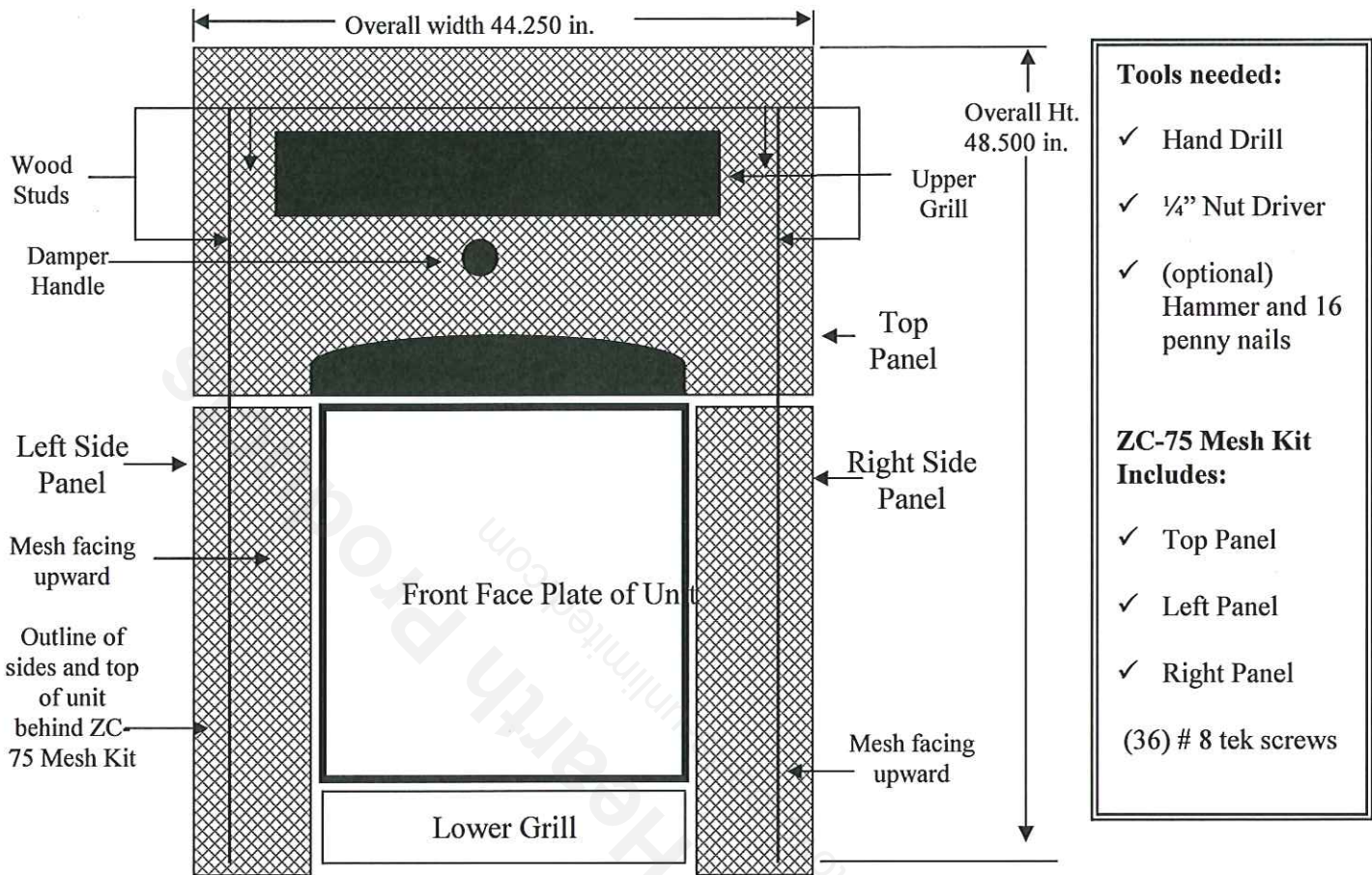


FIGURE 13

- 1) Take the mesh kit and hardware out of the packaging and make sure that all items are included. Contact your supplier if any parts are missing.
- 2) Align the left & right panels so that the mesh openings are facing upwards. Leave a small amount of expansion room (1/16" is normal).
- 3) Fasten the mesh in place using the self drilling and tapping screws provided. Screws every 8-10 inches apart is sufficient. Do not tighten the screws tight on the face of the unit. Leave expansion room for the mesh to move (1/32" is sufficient).
- 4) Either wood screws or nails (not provided) can be used to fasten the mesh to the wood studs on the left and right sides of the unit (these should be tight).
- 5) Follow the same procedure for the top panel.
- 6) Make sure that the grill opening is aligned parallel and straight with the unit.

WARNING: Wear gloves when handling / installing the Mesh Kit. The edges are sharp !!

CHIMNEY INSTALLATION NOTES

GENERAL NOTES

- ✓ If possible install an interior chimney as it will provide better performance. In areas with continuous temperatures below 18 C (0 F), the use of an exterior chimney increases the likelihood of operating problems such as low draft, high rate of creosoting, and poor startup characteristics. Exterior chimneys are also prone to down drafting and flow reversal. Installations which are located low in the house such as in a basement, in combination with outside chimneys, are especially prone to flow reversal.
- ✓ A chimney venting a fireplace shall not vent any other appliance.
- ✓ The **MAGNUM ZC** fireplace is not listed for use with a masonry chimney or with chimney liner.
- ✓ The minimum chimney height, including fireplace, is 12' 6" (3.8 m) for vertical chimney.
- ✓ Chimney – Any listed type HT 7" or 8" diameter 2100 degree insulated or air-cooled.
- ✓ The maximum chimney height supported by the fireplace is 10' (3 m). If additional height is required, use a roof support at 30' (9 m) interval.
- ✓ The chimney must extend at least 3' (915 mm) above its point of contact with the roof and at least 2' (610 mm) higher than any wall, roof or building within 10' (3000 mm) of it (SEE FIGURE 18).
- ✓ If the chimney extends higher than 5' (1500 mm) above the roof, it must be secured using a roof brace or guide wires.
- ✓ A rain cap must be installed on top of the chimney. Failure to install a rain cap may cause the fireplace to corrode. **The warranty will be void if a rain cap is not used.**
- ✓ Cut and frame square holes in all floors and the roof to provide 2" (50 mm) of clearance between the chimney and any combustible material. Do not fill this 2" (50 mm) space with any material.
- ✓ Portions of the chimney may extend through accessible spaces and shall be enclosed in all cases to avoid personal contact with the chimney and damage to the chimney.

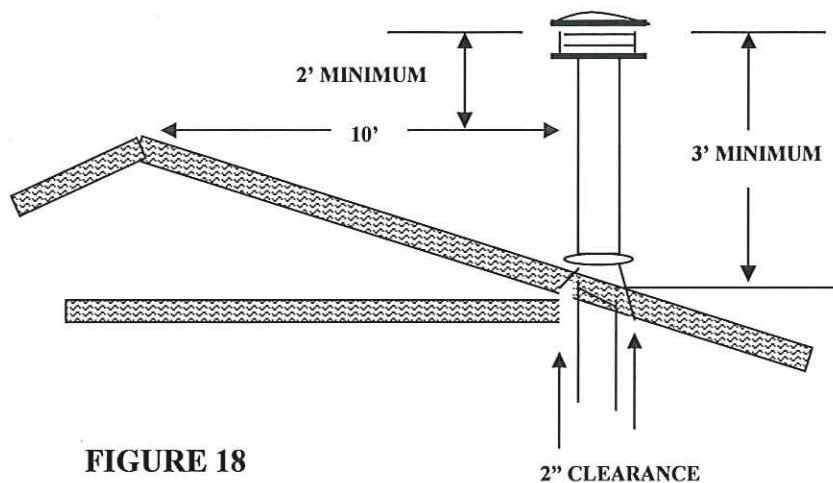


FIGURE 18

NOTE: THE TESTING LAB DOES NOT ALLOW A.E.S. TO MAKE RECOMMENDATIONS OR SHOW COMPLETE INSTRUCTIONS ON PROPER VENTING CLEARANCES OR CONSTRUCTION.

PLEASE ACQUIRE THIS INFORMATION FROM YOUR CHIMNEY VENTING SUPPLIER.

THE DRAWINGS SHOWN ARE FOR ILLUSTRATION ONLY AND ARE NOT INTENDED TO SHOW ACTUAL CONSTRUCTION OR CLEARANCES REQUIRED BY YOUR CHIMNEY VENTING BRAND.

ANCHOR PLATE INSTALLATION GUIDELINES

Your **Magnum ZC** fireplace comes with the option of either 7" or 8" chimney takeoff. No matter which is used it is important that proper procedure is followed when installing the chimney anchor plate that you purchase from your chimney supplier.

The drawing below shows the proper way that the anchor plate would go on the unit. By sealing and fastening the anchor plate on to the top of the fireplace you will eliminate the chance for smoke leakage.

- ✓ Before fastening the anchor plate to the unit, place a thick bead of high temperature caulking underneath the anchor plate base (SEE FIGURE 19). This needs to be able to take temperatures in excess off 1,000 degrees. You may also use a high temperature gasket such as round stove gasket material. This would also be glued into place with high temperature cement.
- ✓ Place the anchor plate onto the fireplace and squeeze the sealant into place.
- ✓ Fasten the anchor plate to the top of the fireplace with four zip screws.

- ✓ When positioning the first section of Type HT chimney on the anchor plate, make sure that the pipe matches properly with the anchor plate and fasten into place using zip screws to hold the two parts together. It is best to seal the entire area with high temperature cement to assure that all connections are sealed.

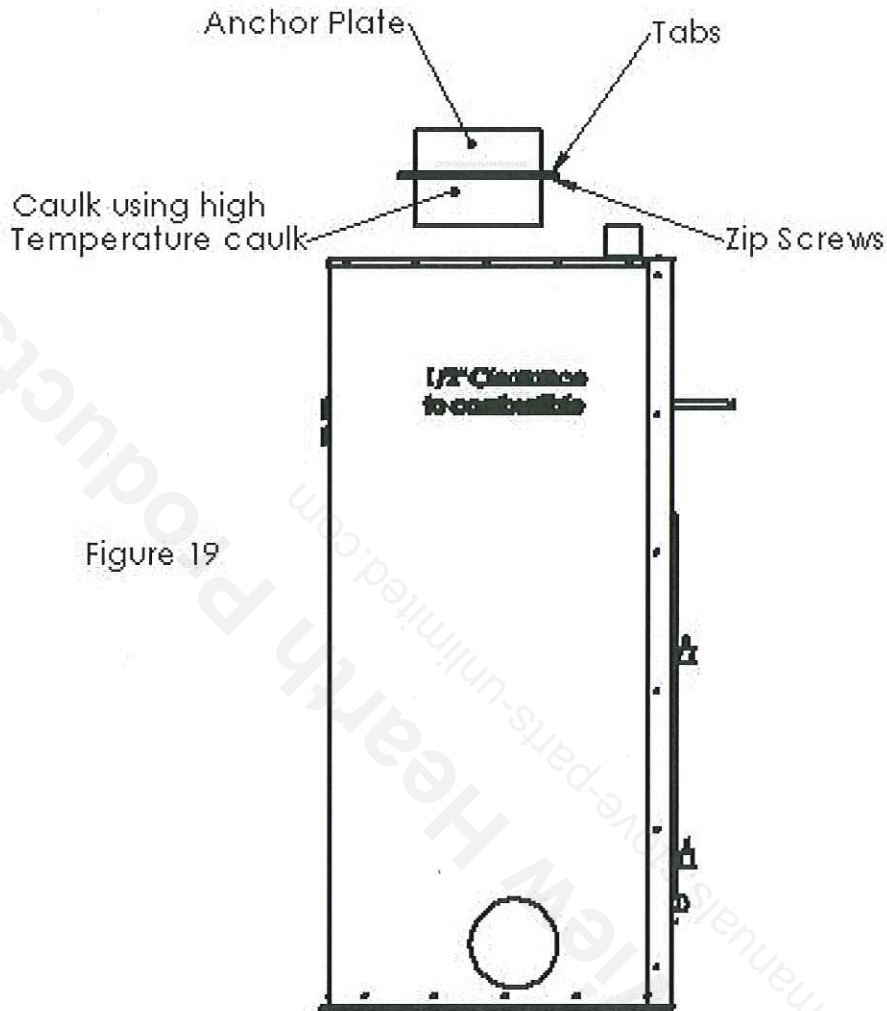


Figure 19

REMEMBER: SAFETY FIRST!

DO NOT PLACE INSULATION OR ANY OTHER MATERIAL IN THE AIR SPACE AROUND THE CHIMNEY OR FIREPLACE. INSULATION PLACED ON OR AROUND THE FIREPLACE OR CHIMNEY MAY CAUSE ADJACENT WOOD TO OVERHEAT AND CATCH ON FIRE.

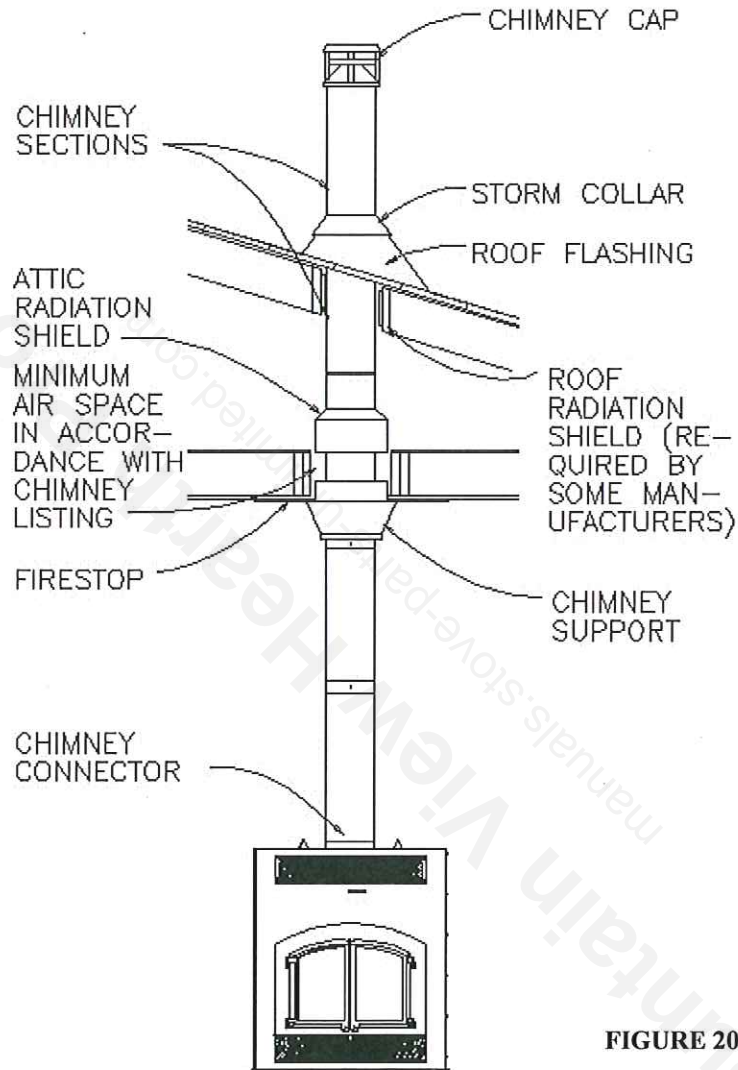
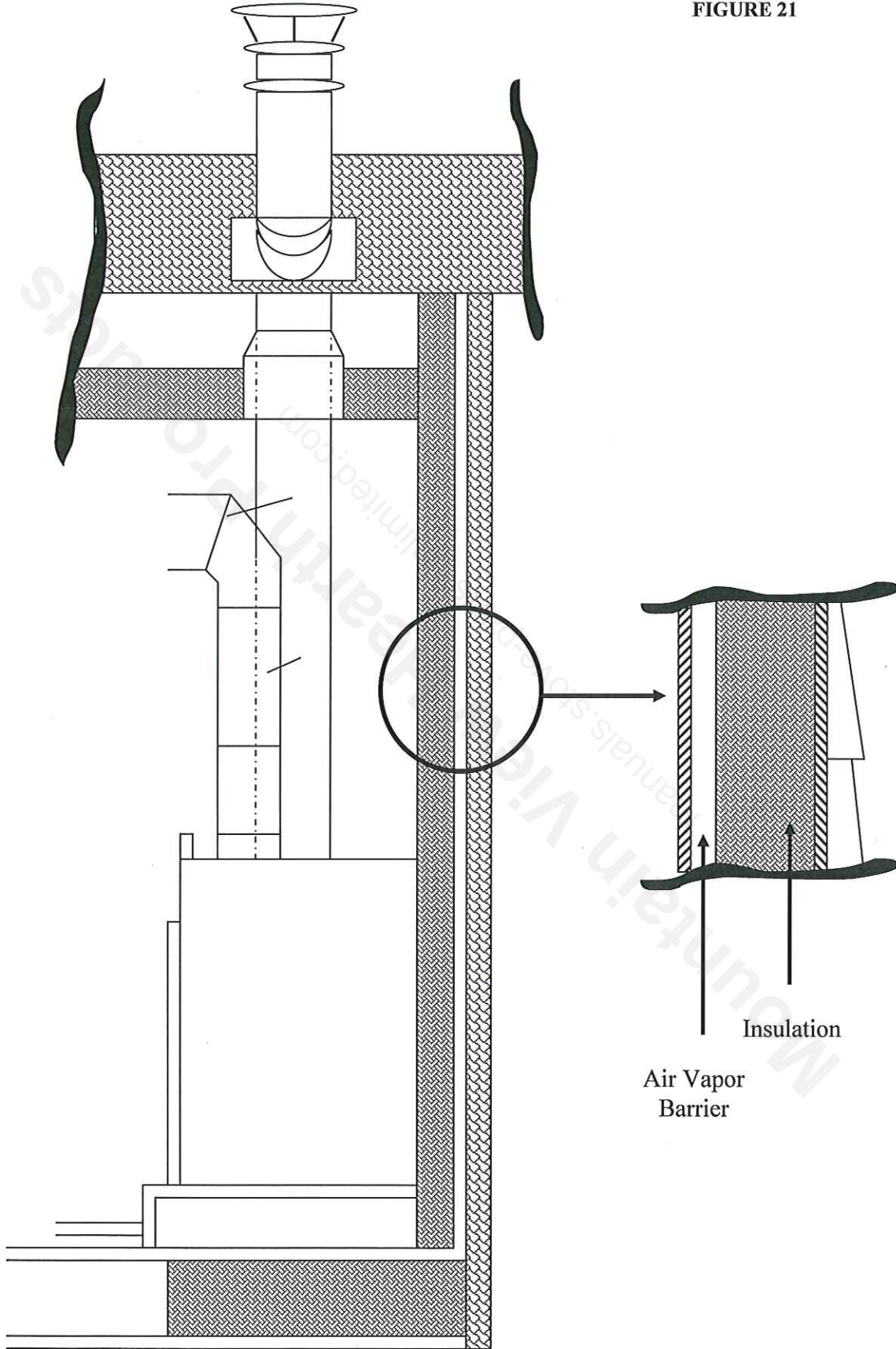


FIGURE 20

INSULATED CHASE CONSTRUCTION

FIGURE 21



MAGNUM ZC FIREPLACE INSTALLATION INSTRUCTION

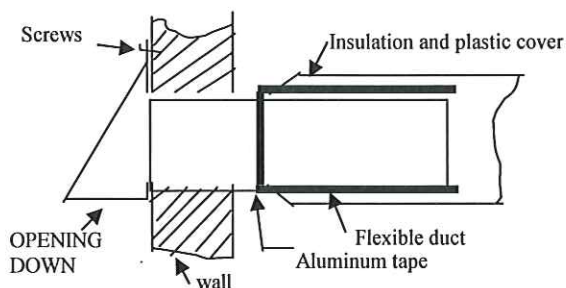
- 1) Move the fireplace into place.
- 2) Install the outside air assembly.
- 3) Install the floor protector. Refer to the section Hearth Extension Requirements and make sure the gap between the fireplace and the hearth extension is sealed (refer to page 15).

OUTSIDE AIR INSTALLATION (optional)

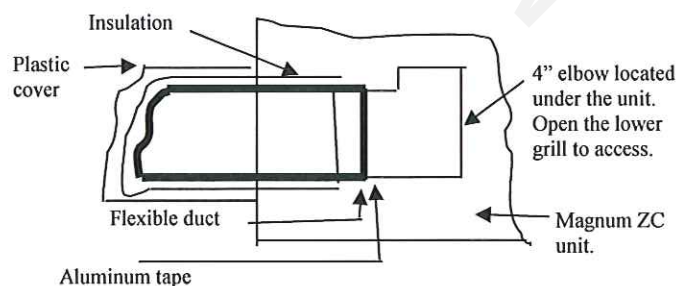
If an Outside Air Kit is to be installed observe the guidelines given in the section on Outside Air Kit Requirements. Make a 4 ¼" (110 mm) hole in the outside wall of the house at the chosen location. From outside, place the outside air register in the hole (open side down) and fasten the register to the wall with screws as shown (SEE FIGURE 22). At each end, carefully pull back the insulation and the plastic cover exposing the flexible duct. Place the flexible duct over the register tube and over the fireplace's outside air connector 4" elbow located inside the bottom of the fireplace (SEE FIGURE 23).

Using aluminum tape, wrap the joint between the flexible duct and the air inlets. Carefully push the insulation and on the outside register (SEE FIGURE 22) pull the plastic cover back over the duct. Using aluminum tape, fasten the plastic cover in place. Only the insulation will go into the fireplace area on the unit side.

OUTSIDE AIR INTAKE REGISTER
FIGURE 22



OUTSIDE AIR CONNECTOR IN UNIT
FIGURE 23



OPTIONAL FAN KIT SYSTEM

Fan Kit Components:

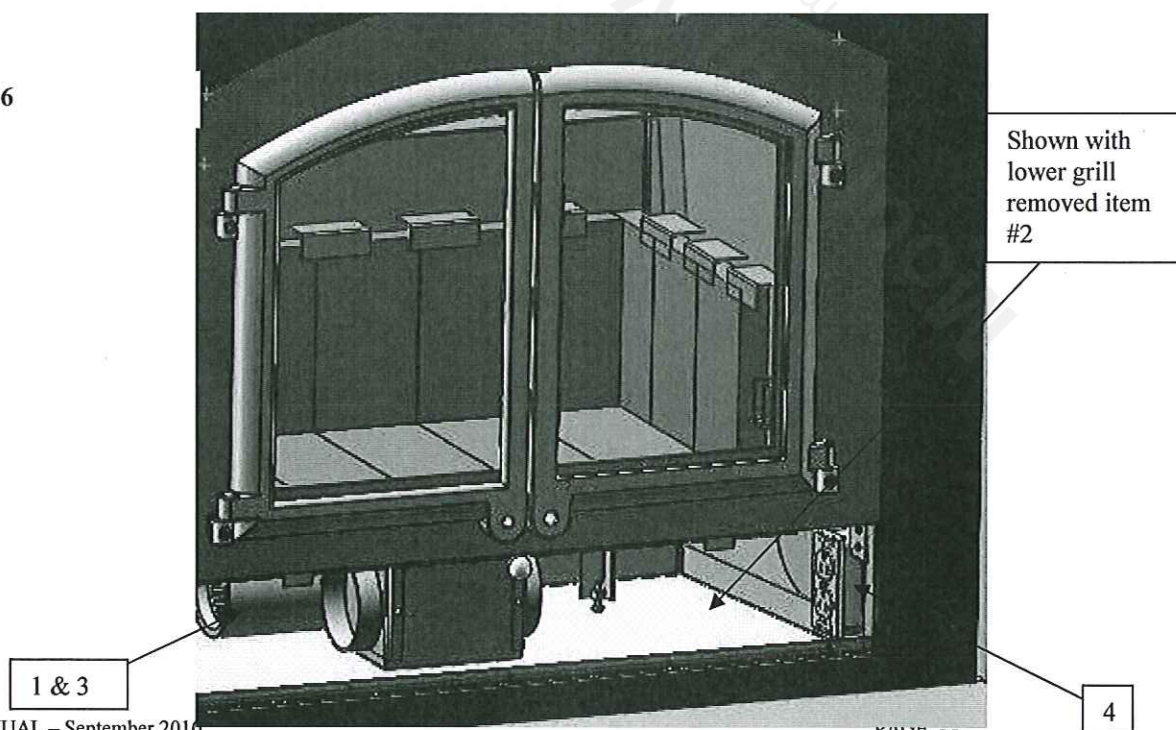
- ✓ 160 CFM blower assembly with 12 inch long grounded cord.
- ✓ Electrical box assembly with plug receptacle and cover.
- ✓ Wall mount variable speed switch.

NOTE: a qualified installer should do Installation of this fan kit.

FAN KIT INSTALLATION

- 1) Take fan kit out of box and inspect for damage and parts missing.
- 2) Open lower grill **②** and place fan housing **①** in the back of the fireplace between the back legs and toward the back of the fireplace cabinet. Make sure that the rubber vibration washers do not fall off of the legs of the fan housing.
- 3) Route the cord along the bottom of the fireplace to the front right corner by the electrical junction.
- 4) Mount the 2" X 4" junction box **④** in the front right corner of the inside cabinet where the electrical knockout plug is located. (The insulation between the inside and outside knockout has to be cut out.)
- 5) Loosen the wire cord retainer on the outside of the cabinet and run the electrical wire through into the junction box. Connect the wires to the outlet receptacle and mount the receptacle to the outlet junction box.
- 6) Place the receptacle cover on the junction box and plug in the electrical cord. **③**
- 7) Mount the variable speed control in the wall box that the electrician has provided.

FIGURE 26



THERMO-CENSOR KIT - PROCEDURE FOR INSTALLING

Tools Needed: Flat Screwdriver, Drill with ¼" Hex socket driver bit, ¼" socket wrench

Contents of Kit: Bracket, Thermo-Censor, Wiring, (2) ¼" tek screw, Romex connector

- 1) Unpackage the Thermo-Censor kit and make sure that all the parts are included in the kit.
- 2) If the fireplace system has a blower kit installed, make sure to disconnect the electrical supply before installing the kit.
- 3) Open the lower grill and unplug the blower (if installed). Take the front cover off the electrical box located in the front right corner of the unit. Remove the receptacle from the junction box.
- 4) Slide the Thermo-Disk bracket up the inside of the fireplace so that the disk is located against the firebox as shown in Figure 28. The bracket should be raised just enough to hide the horizontal portion of the bracket and up against the right flange of the lower grill housing.
- 5) Using the ¼" hex socket drive bit in the drill attached the #8 tek screws making sure that you do not over tighten the screw and strip it.
- 6) Make sure that the two wires coming from the Thermo-Censor are not binding against the side of the unit. Route the wires so that they do not touch the firebox of the unit.
- 7) Attach the Romex connector to the side of the electrical junction box and route the two wires from the Thermo-Censor through the connector. Attach the wires as shown in Figure 29.
- 8) Make sure that all electrical connections are proper and secure. Reverse the procedure to install the electrical receptacle and cover. Plug the fireplace blower into the receptacle and connect the electrical supply back to the unit.

NOTE: If the Thermo-Censor does not kick in after 20-30 minutes after the fire is going, check to make sure that the sensor is up against the side of the firebox as shown in Figure 28. Check all electrical connections to make sure that everything was installed properly.

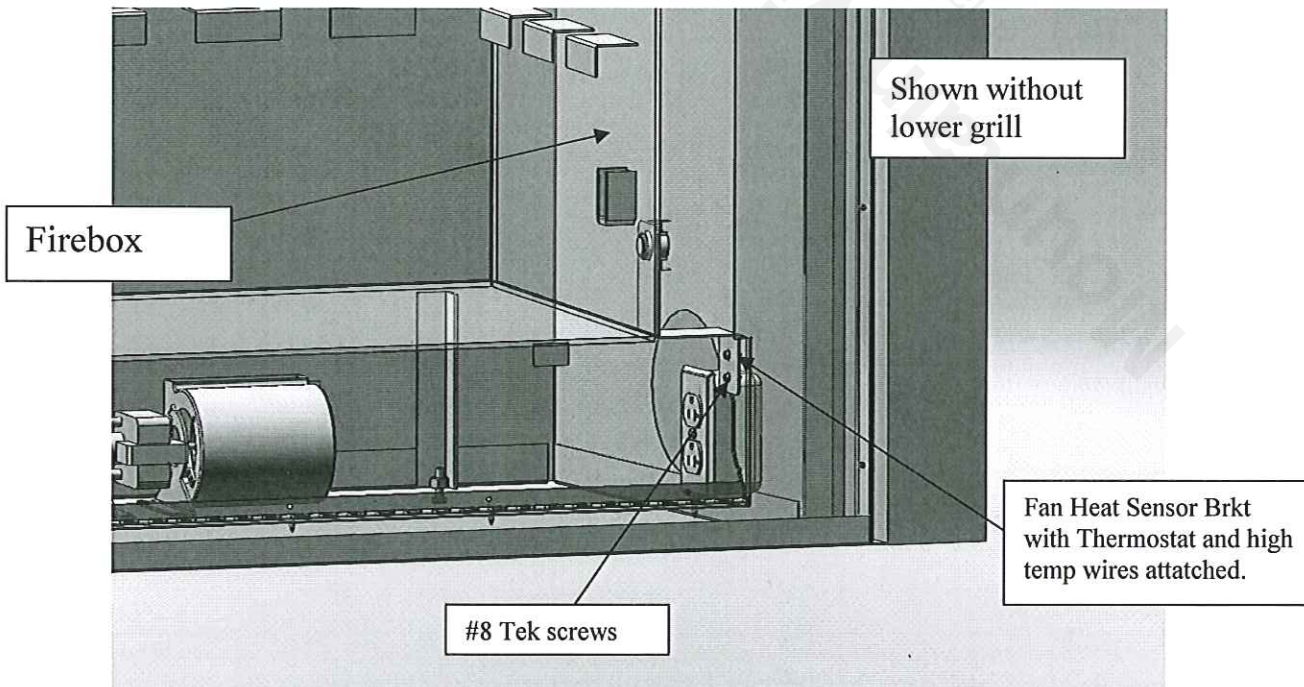


Figure 28

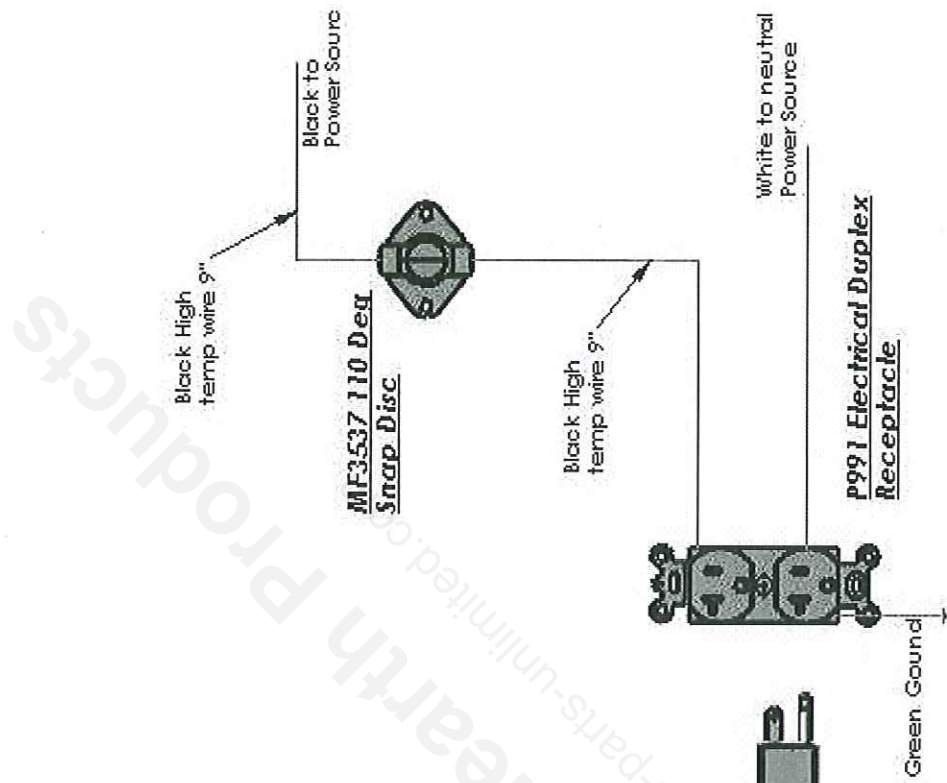
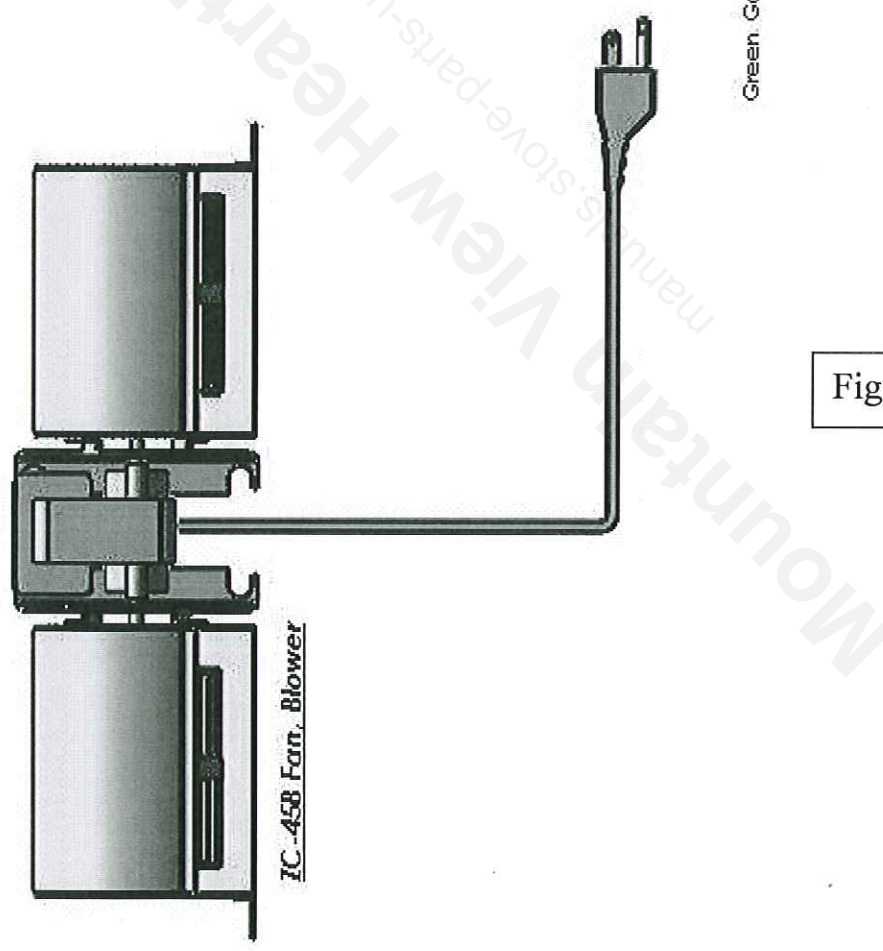


Figure 29



APPENDIX

SPECIFICATIONS

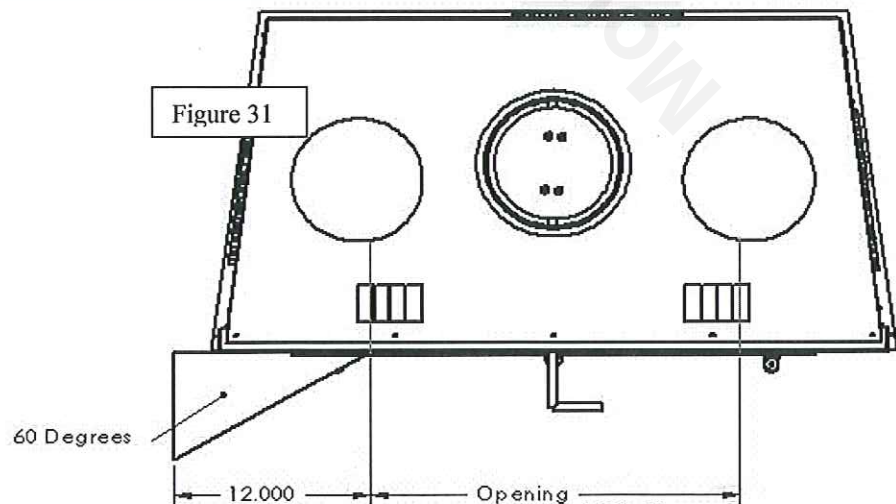
Weight:	550 lbs.
Height:	47" (1219 mm) Top of spacer 49"
Width:	42" (1067 mm)
Depth:	23 ½" (584 mm)

CLEARANCES REQUIRED TO COMBUSTIBLES

These are the minimum recommended clearances for a safe installation.

Side Wall	12"
Ceiling	7' (2135 mm) measured from the base of the appliance
Fireplace Enclosure:	
Bottom	0"
Sides	½"
Back	½"
Top	Keep area above the fireplace clear to 7' (2135 mm) height measured from the base of the unit except as noted in "FRAMING"
Mantel	58" from the base of the unit if not using remote ducts 53" from the base of the unit if using remote ducts
Hot Air Duct	2" (50 mm) except at register frame as determined by the integral spaces. Hole size is 10 ¾" X 10 ¾"
Grill Frame	10 ¾"(275 mm) X 10 ¾" 10 ¾" (275 mm)
Hot Air Grill	8" to an adjacent ceiling or mantel
Outside Air Duct	0"

Note: A wall, perpendicular to the fireplace front, must be at least 12" (300 mm) from the fireplace opening. A wall at 60 degrees to the front and starting at the fireplace's outer edge is permitted. Projections behind this wall (shaded area) are permitted (SEE FIGURE 31).



FIREBRICK INSTALLATION & LAYOUT

- ✓ The **Magnum ZC** comes standard with the firebrick already installed. If you need to take the firebrick out for transportation or installation reasons you may refer to the diagrams below for proper installation.
- ✓ The best way to install the firebrick is to install the side firebrick first (three on each side), then the back (five) and finally the bottom (five in the back and three in the front).
- ✓ Then install the upper firebrick baffle plate and place the five firebricks in the holder.

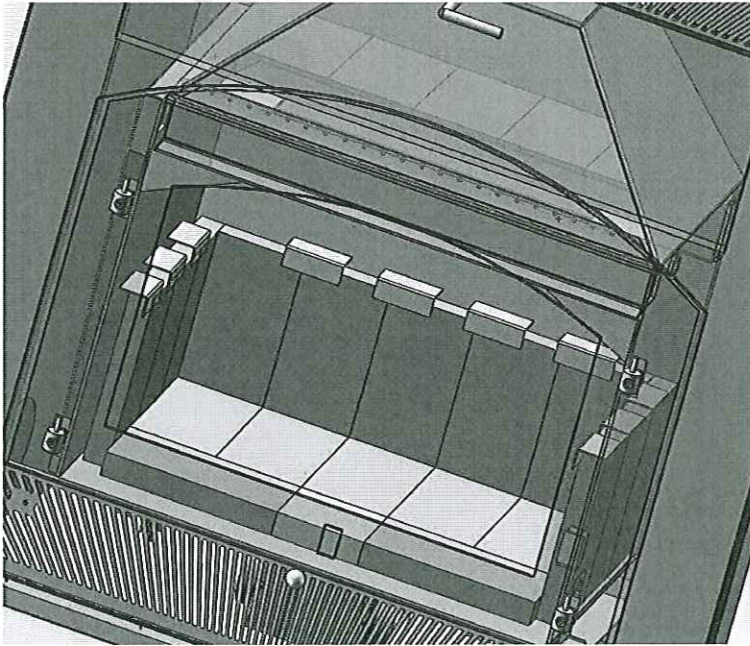


FIGURE 32

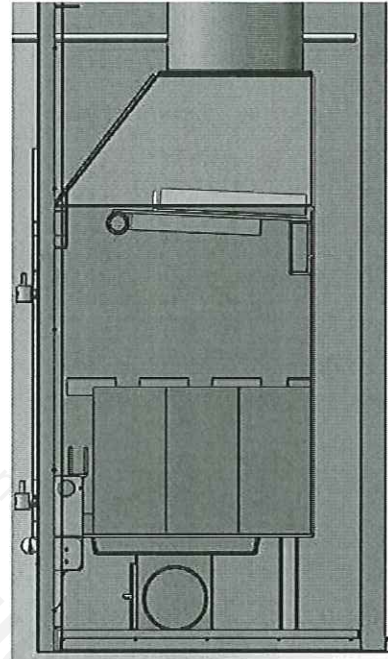


FIGURE 33

TROUBLE SHOOTING GUIDE

Unplug all electrical connections before performing any maintenance work.

PROBLEMS	CAUSES	SOLUTIONS
<p>? Odor / visible haze</p> <p>? Fire burns lazy or dirty</p>	<ul style="list-style-type: none"> ◆ Paint / Oils curing off unit ◆ Combustion-air supply closed ◆ Wood is wet ◆ Damper Control closed too far <p>Chimney not high enough</p>	<ul style="list-style-type: none"> ✓ Burn small fires for a couple days and provide ventilation in room. ✓ Open outside-air control ✓ Check for blockage in the piping and the vent on the outside of the house. ✓ Use only well seasoned wood. ✓ For the first 30-45 minutes have the damper control full open. When the fire is burning clean adjust the damper 2/3 to full closed. <p>Check with your installer to make sure that the Chimney is working properly and at the right height</p>
<p>? Smoke comes into the room when the doors are opened or when the fire is first started</p>	<ul style="list-style-type: none"> ◆ Chimney damper not open ◆ Chimney not high enough ◆ Chimney cap blocked or too close to the flue ◆ Depressurization inside the home ◆ Ice build-up on chimney cap/top ◆ Chimney needs cleaning ◆ Adjacent trees, buildings, etc too close ◆ Poorly insulated chase way 	<ul style="list-style-type: none"> ✓ Open damper control full open. ✓ Check the chimney system to make sure that it is the proper height and clean. ✓ Open a window and correct the problem. ✓ Clean Chimney System ✓ Make sure that the installation was done properly and the chase way was insulated.

PROBLEMS	CAUSES	SOLUTIONS
<p>❓ Glass gets dirty fast</p>	<ul style="list-style-type: none"> ◆ Wet wood ◆ Not enough combustion-air ◆ Chimney not high enough ◆ Depressurization in the home 	<ul style="list-style-type: none"> ✓ Use only well seasoned wood ✓ Open combustion-air control ✓ Check the chimney system ✓ Open a window/correct problem
<p>❓ Unit won't generate heat</p>	<ul style="list-style-type: none"> ◆ Wood is not well seasoned or is wet from snow or rain ◆ Not enough wood being used ◆ Not enough grill opening ◆ Not enough combustion-air ◆ Too much chimney draft 	<ul style="list-style-type: none"> ✓ Use only dry well seasoned wood. ✓ Add extra wood on the fire. ✓ Do not block the grill opening. ✓ Open combustion-air control. ✓ Close draft control. Restrict the draft on top of the chimney.

AMERICAN ENERGY SYSTEMS INC. LIMITED PRODUCT WARRANTY

This warranty is in effect on all products sold after 01/01/2009 and supersedes any and all warranties currently in existence.
Please keep a copy of this warranty for your personal records or in the event of a claim

American Energy Systems Inc., hereinafter referred to as (AES), warrants to you, the original consumer purchaser, that this product is free from defects in material and workmanship for a period of five (5) years from the original purchase date minus any time past one (1) year from manufacturing date, and that the product's electrical parts and steel firepot, are free from defects in material and workmanship for a period of one (1) year from the original consumer purchase date minus any time past one (1) year from manufacturing date, and that the cast iron firepot models carry a lifetime warranty against defect in material or workmanship (excluding war page or deterioration), and that door glass carries a lifetime replacement warranty against heat breakage (does not cover accidental breakage). There is expressly no warranty on installation of product, any venting, grates, gaskets, door latches, insulation, ceramic or brick boards/logs/backing, paint, plated surfaces/doors/trims, baffles, bushings, bearings, auger flightings, war page or discoloration of steel or plated parts or any other normal wearing part. In the event the product fails to conform to this warranty, AES, through the place where you purchased the product or if purchased on the AES E-Com store directly through AES, will provide the parts and components necessary to remedy such nonconformity. AES will not be responsible for any labor, mileage or freight cost to the factory under this warranty. This warranty is not transferable.

In order to obtain performance under this warranty, you must (1) have registered this warranty within 30 days of purchase by completing and returning the warranty registration card or filling in the on-line warranty registration form at www.magnumheat.com, and (2) promptly report the claimed nonconformity to your place of purchase, also providing your name, address, phone number, proof of purchase, date of purchase, the model and serial number of the stove, digital pictures of installation and venting inside and outside of the home, pictures of the claimed nonconformity part and the claimed nonconformity. All claims must be submitted in writing to your place of purchase.

AES shall have no warranty obligations if this product; (1) was not purchased from an authorized AES dealer; (2) was not installed by a AES dealer or other qualified installer; does not have outside combustion air hooked directly to the unit; (3) was not operated and maintained in strict accordance with the manufacturer's instructions, local or national codes or (4) was subject to abuse, misuse, negligence or accident. AES shall have no warranty obligation for damage caused by improper handling, freight damage (must be reported to freight provider), over-firing, unapproved fuel, variance in feed rates, variances in BTU output or the unauthorized disassembly or modification of the product. AES shall have no warranty obligation if this warranty is not timely registered, for claims which are not submitted through the selling AES dealer, or for claims submitted verbally or without the required information and documentation.

Before exercising this warranty, an AES representative (the place where the product was purchased or AES approved person) must inspect the part/unit to determine if the part/unit is defective. If a local AES representative is not available the original purchaser of the product must submit digital pictures of the part/unit, installation of the unit to AES at technical@magnumheat.com If the inspection reveals that the failure is due to defective material or workmanship and the part is covered by the conditions of this warranty, AES will, at its option, repair the defective part/unit. The sole duty of AES and liability under this warranty is limited to the repair of the covered defective part/unit. The purchaser shall assume all costs related to shipping the replacement parts or return of the unit to the factory for repairs. If it is determined that the defect was caused by AES, AES will cover the costs of shipping the repaired part/unit to an AES approved shipping point. AES will not cover additional freight or delivery services such as residence delivery charges, special handling, etc.

INSTALLATION, VENTING, REMOVAL OR REINSTALLATION COSTS ARE NOT COVERED BY THIS WARRANTY.

THE WARRANTY PRINTED ABOVE IS THE ONLY WARRANTY APPLICABLE TO THE PRODUCT. ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE DISCLAIMED. IT IS UNDERSTOOD AND AGREED THAT AES'S LIABILITY UNDER THIS WARRANTY SHALL BE LIMITED TO THE PROVISION OF REPLACEMENT PARTS AND SHALL NOT INCLUDE LIABILITY FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES. ANY ACTION BROUGHT UNDER THIS WARRANTY MUST BE BROUGHT WITHIN ONE YEAR OF THE ACCRUAL OF THE CAUSE OF ACTION AND MAY ONLY BE BROUGHT IN THE CIRCUIT COURT OF MCCLOUD COUNTY, MINNESOTA.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damage, so the above limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

ALL WARRANTY CLAIMS MUST BE SUBMITTED IN WRITING THROUGH THE PLACE WHERE THE PRODUCT WAS PURCHASED. In the event where the place of purchase has ceased business or if you feel that there is a legitimate reason that you cannot submit your claim to the place where the product was purchased you may make a written request to the factory by emailing your request along with all of the required information to technical@magnumheat.com. **NOTE: Verbal requests will not be recognized. If it is determined that warranty could have been performed by the place of purchase, the factory will deny the claim.**

Included with the claim must be the following information: (if this information is not complete, the claim will be denied)

Name, address, telephone number, email address, of place of business where product was purchased & also purchaser contact info.

Date of purchase, model and serial number of product, digital pictures of product (front, sides, back, venting inside and outside)

(If there is ductwork, there must be digital pictures of entire ductwork installation, static pressures, air flow measurements, and contact information of licensed/factory certified contractor that installed unit)

Nature of defect, what has been serviced (service record), who installed product along with contact information.

LIMITED WARRANTY ON CAST IRON PLATED DOORS

Following is a breakdown of the warranty of all of the Magnum cast iron plated doors. Please read this warranty so that you are aware of the limitations and warranty conditions.

American Energy Systems, Inc. will warranty its cast iron plated doors under the following conditions:

- 1) Plated cast iron doors are warranted to be free of defects at the time of purchase. Small holes and minor discoloration are common in cast iron, and are not considered to be defects.
- 2) When the doors are delivered to dealers, they are checked for scratches. Doors will NOT be warranted for scratches caused by the consumer. American Energy Systems, Inc. will re-plate scratched doors at cost for the customer as a service to them.
- 3) *Plated cast iron doors are NOT warranted for discoloration of plating due to overheating, abuse or cleaners used to clean glass.*
- 4) Proper cleaning materials must be used on the different types of plating (24k gold, nickel, and antique brass) to insure their finished is maintained. Polishing cleaners can be purchased from your local Magnum reseller.

AMERICAN ENERGY SYSTEMS, INC.
150 Michigan Street SE – HUTCHINSON, MINNESOTA 55350
(320) 587-6565 PHONE – (320) 587-8872 FAX
email: technical@magnumheat.com www.magnumheat.com