

THE Magna-FyreTM

CLEAN BURNING zero clearance FIREPLACE INSTALLATION INSTRUCTIONS

*by
Wilkening
Fireplace Co.*

INDEX	PAGE
Before you begin installation	3
Clearances and height requirements.....	4
Locating your fireplace	5
Hearth requirements.....	5
Chimney height, offset and clearance requirements	6
Combustion air requirements	7
Framing specifications	7
Mobile home installation requirements	8
Doors for the Magna-Fyre™	8
Heated air ducting options.....	8 & 9
Facing.....	10
Blower installation.....	10 & 11
Electric wiring diagrams	11
Furnace ducting option.....	11
Installing the refractory liner and baffle	14
INSTALLATION STEPS	15
Care and maintenance	15
Generating maximum heat output	16
Refueling your fireplace.....	17
Trouble shooting	17
Starting the fire	18
Combustion control.....	18
Negative pressure in the home.....	18
IMPORTANT NOTICES	19
Warranty registration	21
Diagrams: Corner installation and stacking of 2 units.....	23

Read this section before you begin installation of the Magna-Fyre™ Clean Burning Fireplace.

This manual will enable you to make this installation safe, efficient and dependable. Please read the instructions and understand them completely before starting the installation.

Do not alter or modify any of the components. Do not obstruct the air circulation vents as over heating will result. Any alteration or modification of the fireplace system or components will void the warranty, listing and approvals which could result in an unsafe or potentially dangerous installation. **Use of this product in an altered installation or with altered components may result in fire, loss of property and loss of life.**

Keep this manual for future reference.

Notice: Read and follow these rules of safety.

1. Before starting installation, read and understand this manual. Failure to follow instructions will result in an unsafe condition, malfunction, property damage or loss of life.
2. Check local building codes. If local codes are more restrictive than this manual, they must be followed.
3. This fireplace must be installed with a chimney system that is listed in the Chimney Section of this manual.
4. To ensure a safe efficient fire, always check the fireplace prior to use for creosote build up, excessive ash and soot. Clean the fireplace and chimney regularly.
5. Use solid wood or processed solid fuel fire logs only. Do not use chemical chimney cleaner, gas logs, gas starters or flame colorants. Do not use coal or charcoal in this fireplace unit.
6. Do not connect the Magna-Fyre™ to a chimney flue that is serving another appliance.
7. NEVER use gasoline, gasoline type lantern fuel, kerosene, lighter fluid or any liquid to “freshen” the fire. Keep all such highly combustible liquids well away from the fire.
8. Never leave children unattended when there is a fire burning in the fireplace. It is recommended that each user of this appliance familiarize themselves with its operation prior to initial use.
9. Allow the fireplace to cool before performing any service to it. Always shut off any electrical supply prior to working on the system. This will eliminate the chance of electrical shock.
10. Wilkening Fireplace Co. is not responsible for any smoking due to inadequate draft or poor burning which results from lack of combustion air or chimney draw.
11. Wilkening Fireplace Co. does not warrant “smoke free” operation or are we responsible for inadequate draft caused by mechanical systems, construction conditions, inadequate chimney height, negative pressure or environmental conditions beyond our control.
12. Do Not use any fireplace insert or other product in conjunction with this fireplace that is not specified by Wilkening Fireplace Co. for use with this fireplace.
13. Never, under any circumstances, install a fireplace or chimney component that is suspect of having been damaged in transit or handling. When in doubt contact your dealer.

CLEARANCES, DIMENSIONS AND SPECIFICATIONS

The Magna-Fyre™ clean burning fireplace is a wood burning, high efficiency, heat circulating fireplace system designed for minimum clearance to combustible framing material.

The illustrations shown in this manual reflect typical installations with minimum dimensions and are designed for framing reference only. Additional clearance to combustibles is permitted. The actual installation may vary due to individual design preferences. No matter what the design, ALWAYS maintain the minimum clearances to combustible materials and follow these instructions.

The Magna-Fyre™ fireplace has been safety tested and is listed to UL 127 and 391 standards by InterTek. This unit may be installed as a central furnace, a supplementary furnace or in a mobile home. This unit is designed for installation in accordance with the National Fire Protection Standard for chimneys, fireplaces and solid fuel burning appliances, NFPA 211, and in accordance with all state and local building codes. **Failure to follow these instructions or adapt parts for use with this unit that are not intended will create a fire hazard and will void your warranty.**

CLEARANCES AND HEIGHT REQUIREMENTS

The Magna-Fyre™ may be placed directly on wood flooring, all carpet or vinyl must be removed. The outside air kit, fire stop spacer and roof flashings may be placed directly on or next to normal construction materials. The chimney requires a minimum 2" clearance to combustibles. A combustible mantle must be a minimum of 52" above the base that the fireplace is placed on.

If you have any questions regarding this product or installation, call your dealer or Wilkening Fireplace Co. at (218)-547-3393.

Warning: Do not pack or fill the required air spaces with insulation or other material. No material of any kind is allowed inside the chase area. To insulate the chase, do so between the stud walls behind the sheet rock.

Notice:

1. Do not insulate the chase with blown in or fill type insulation materials.
2. Local codes may not require firestopping at the ceiling level for an outside chase installation; however, it is recommended for added safety and reduced heat loss for the home.
3. We recommend that you insulate at least the base and the first floor ceiling of the chase to prevent heat loss.
4. Some local codes require one hour fire rating on one or all sides of fire chases. Check with local code authorities prior to construction.

SELECTING THE LOCATION OF YOUR FIREPLACE

To determine the best location for your fireplace, take into consideration the location of windows, doors, adjacent side walls and the general traffic flow pattern of the room; allowing space in front of the fireplace for a hearth extension and mantle. Hot air ducts, heat circulation ability of the unit and ducting ability for combustion air and the central furnace blower (if used) must also be considered when selecting the location. If possible, you should select a location that does not require cutting floor joists or rafters.

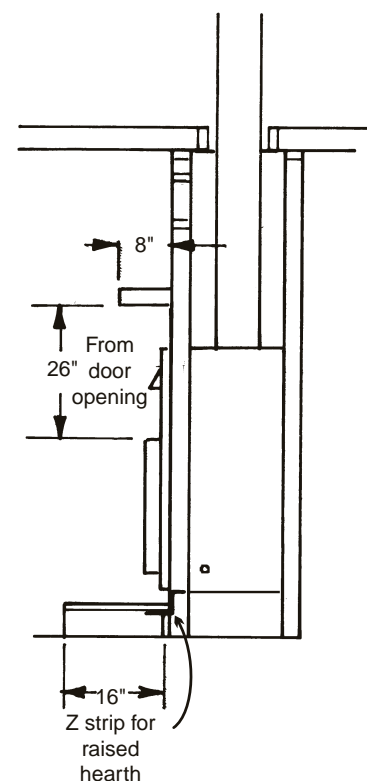
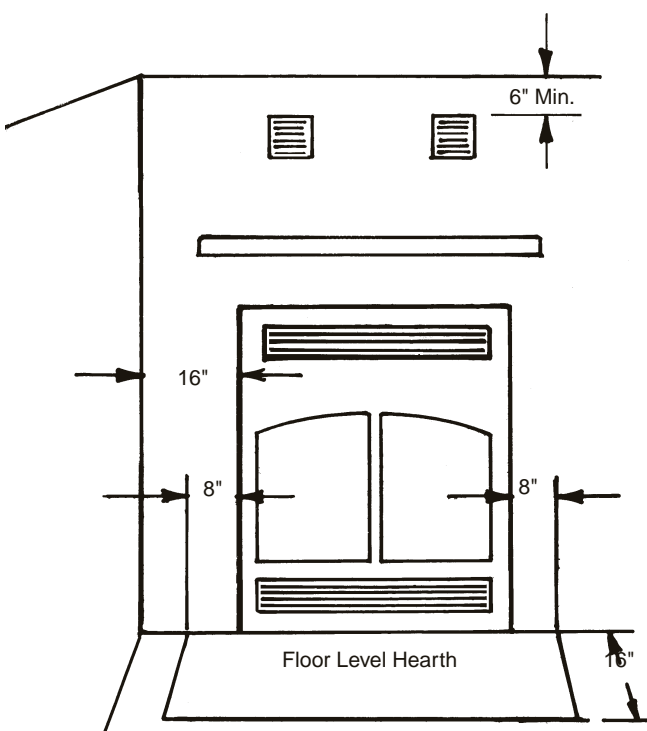
In most cases no additional floor support is needed for the fireplace system. Determine if your floor provides adequate support by estimating the fireplace system weight. Consult your local building code requirements or a structural engineer to determine if additional support is needed.

HEARTH EXTENSION REQUIREMENTS

The Magna-Fyre™ can be installed on a raised hearth provided there is a minimum of 7' measured between the fireplace base and finished ceiling. Hearth extensions must extend 16" in front of and 8" to each side of the fireplace opening.

Hearth extensions that consist of less than 3½" thick non combustible material require the use of a 1" thick millboard or similar material, with a R factor of 2.2 and a K factor of .45 extending 16" in front of the fireplace front and 8" to each side of the opening. Spark Guard: 2 - L shaped metal strips are provided to create the spark guard where the hearth framing meets the fireplace front. These pieces are 2½" x 1½" x 42" and are designed to create a barrier for sparks that may penetrate the hearth to the framing below. The spark guard must be placed 2½" under the fireplace base and extend 2½" forward under the hearth stone. When installing this 2 piece guard, place the first section on top of the protruding hearth. Next slide the second section under the fireplace, overlapping the vertical return of the lower section. If this unit is installed on a non combustible base with no combustibles below the hearth, no spark guard is needed.

The room air inlet vent at the base of the fireplace must not be obstructed by any hearth material abutting the unit.



CHIMNEY REQUIREMENTS

The Magna-Fyre™ requires an 8" diameter chimney. Any factory built chimney listed to UL-103HT may be used. The use of one brand of chimney is required. Do not mix components from several manufacturers as this may cause a fire hazard.

NOTE: An anchor plate for the chimney brand selected must be used to adapt the chimney to the unit.

If possible install the chimney on the interior of the structure as it will provide better draft performance. In areas that experience below 0 F. temperatures, the use of an exterior chimney increases the possibility of poor draft, increased creosote formation and slow starting of the fire. Installations which are located low in the house such as the basement, in combination with an outside chimney, are especially prone to flow reversal on start up. A chimney cap is required on all installations to validate the warranty. Do not connect this fireplace to a chimney that serves another appliance.

Chimney Height, Offset and Clearance Requirements

The total height of chimney used on this unit must be a minimum of 12' with a maximum of 36'. The chimney must extend at least 2' higher than any roof or wall that is within 10' of it or a minimum of 3' above the chase top or flat roof. The maximum chimney height that is supported by the unit is 10'. Roof supports or other listed supports must be used for additional height. If the chimney is exposed 5' above the roof, a roof brace must be used to secure it in place.

The maximum offset that can be used with this appliance is 30 degree. Use no more than two 30 degree elbows with return for this installation. Elbows should have at least 1 pipe section between them to ease cleaning. Support the elbows as required by the manufacturer.

The chimney must be enclosed when it is installed in or passing through a living area where combustible material or people may come in contact with it. This is important to prevent personal injury or a fire hazard.

All framing material, supports and insulation must maintain a 2" minimum clearance to any portion of the chimney. This area must not be filled with ANY material. Failure to maintain the 2" clearance will result in a fire hazard. Follow the chimney manufacturers installation instructions and clearance recommendations.

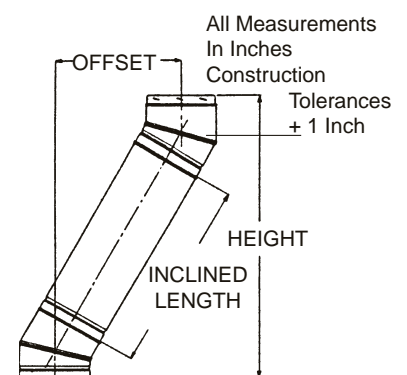
When a chimney chase is to have multiple flues in it, it is recommended that their terminations be at least 16" horizontally apart and 18" vertically apart. This is done to reduce the chance of smoke migrating from one chimney to the other.

The Chase Enclosure

The chase is a framed structure created to encase the fireplace and chimney system. A chase should be constructed just like any other wall, be insulated both on the sides, back and below the base that the fireplace sits on. The R value of the chase should be the same as the rest of the walls of the structure.

1 Inch 15 Degree										
Actual Inclined Length	Total Chimney Lengths	Number of Chimney Lengths in Offset				15 Degree Elbow				Height
		6	12	18	24	36	Offset 7	8	6	
0	0	0	0	0	0	0	1 1/4	1 1/4	10	10 1/4
4 1/8	6	1	0	0	0	0	2 3/8	2 3/8	14 1/8	15 1/8
10 1/8	12	0	1	0	0	0	4	4	20 1/2	21
16 1/8	18	0	0	1	0	0	5 1/2	5 1/2	26 1/4	26 1/4
22 1/8	24	0	0	0	1	0	7	7 1/4	32	32 1/4
27 3/8	30	1	0	0	1	0	8 3/8	8 3/8	36 3/4	37 3/4
34 1/8	36	0	0	0	0	1	10 1/8	10 1/8	43 1/8	44 1/8
39 1/8	42	1	0	0	0	1	11 1/8	11 1/8	48 1/8	48 1/8
45 1/8	48	0	1	0	0	1	13	13	54 1/8	54 1/8
51 1/8	54	0	0	1	0	1	14 1/2	14 1/2	60	60 1/2
57 1/8	60	0	0	0	1	1	16 1/8	16 1/8	65 3/4	66 1/4
62 1/8	66	1	0	0	1	1	17 3/8	17 3/8	70 3/4	71
68 1/8	72	0	1	0	1	1	19	19	76 1/4	76 1/4

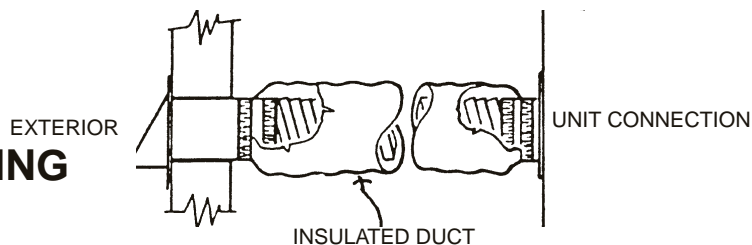
1 Inch 30 Degree										
Actual Inclined Length	Total Chimney Lengths	Number of Chimney Lengths in Offset				30 Degree Elbow				Height
		6	12	18	24	36	Offset 7	8	6	
0	0	0	0	0	0	0	2 1/4	3 1/4	3 1/4	13
4 1/8	6	1	0	0	0	0	5 1/4	5 1/4	6	15 1/4
10 1/8	12	0	1	0	0	0	8 1/4	8 1/4	9	21
16 1/8	18	0	0	1	0	0	11 1/4	11 1/4	12	27 1/4
22 1/8	24	0	0	0	1	0	14 1/4	14 1/4	15	33 1/4
27 3/8	30	1	0	0	1	0	16 1/2	17	17 1/2	37
34 1/8	36	0	0	0	0	1	20 1/2	20 1/2	21	41 1/2
39 1/8	42	1	0	0	0	1	22 1/2	23	23 1/2	47 1/2
45 1/8	48	0	1	0	0	1	25 1/2	26	26 1/2	51 1/2
51 1/8	54	0	0	1	0	1	28 1/2	29	29 1/2	57 1/2
57 1/8	60	0	0	0	1	1	31 1/2	32	32	61 1/2
62 1/8	66	1	0	0	1	1	34 1/2	34 1/2	35	65 1/2
68 1/8	72	0	1	0	1	1	37 1/2	37 1/2	38	71 1/2



Offset chart by G.S.W. Chimney Systems

COMBUSTION AIR REQUIREMENTS

The Magna-Fyre™ fireplace is designed to use outside air to supply each and every combustion air port inside of the fireplace. This creates a sealed system for air supply, eliminating “fireplace odor” due to negative pressure in the home. The supply air hook up is located on the lower left of the fireplace as you face it. A minimum 4" diameter supply pipe is required for combustion air ducting. If ducting more than 5' for combustion air, use a 6" pipe and reduce it to 4" at the unit connection. Do not duct over 20' for combustion air, or have more than three 90 degree bends in the supply pipe. **Do Not terminate the air supply duct in an attic or garage.** An insulated duct must be used to reduce the effect of cold transfer. To duct 5' or less use the standard air kit provided with the fireplace. To duct more than 5' use 6" insulated ducting with adaptors to 4" for the fireplace connection and outside vent.



ENCLOSURE FRAMING AND FACING

Framing

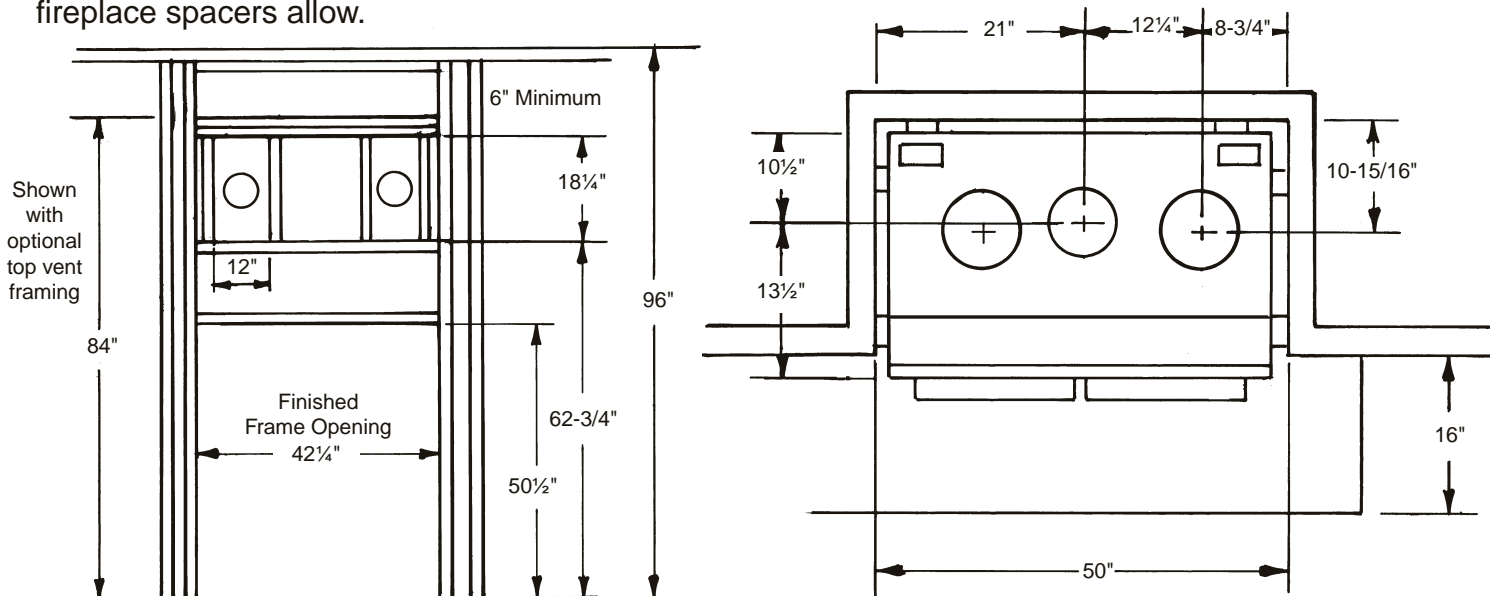
The framing of the fireplace enclosure must not infringe on the area above the fireplace to ceiling level. The only combustible material permitted in this space is a header at the front supporting the face above the opening, and this must not be closer than the metal stand off.

Framing materials must be at least 1½ x 3½ covered with sheetrock. The finished frame opening for the unit is 42¼" wide, 50½" tall and 24" deep. The frame opening for a top vent kit is 12" wide by 18¼" tall each. Normally, framing will be set back to allow sheathing to be flush with the front of the fireplace. No framing material may be located above the unit, except where it contacts the top front unit stand off. Minimum space from the unit top to the ceiling is 33½". **NOTE: If the finished frame opening is created before the fireplace is in place the unit will not fit. The recommended interior chase size for ease of combustion air hook up is 50" wide.**

If a raised hearth installation is planned, an elevated platform must be created for the unit to set on and the hearth material to be installed on. Use 1" millboard with a R factor of 2.2 or a K factor of .45 to protect any raised, combustible hearth structure.

Any part of the frame structure that extends to the outside of the home must be insulated to reduce heat loss.

NOTICE: Under no circumstances can the fireplace be installed without the clearance spacers in place or with modified clearance spacers. Do not notch the header or framing to be installed closer than the fireplace spacers allow.



MOBILE HOME INSTALLATION

The Magna-Fyre™ fireplace may be installed in a mobile home. For use in a mobile home the following additional instructions must be followed to insure a safe installation.

1. **WARNING:** Do not install this unit in a sleeping room.
2. **CAUTION:** The structural integrity of the mobile home floor, wall, and ceiling/roof must be maintained.
3. The unit must be permanently secured to the floor of the mobile home. Bolt the unit in place through the two metal clips attached to each side of the unit and tighten securely.
4. Use only the outside air kit that comes standard with the unit. This kit includes one 5' length of 4" insulated, flex air pipe, two 4" clamps, and one 4" screened outside air vent.
5. The fireplace must be electrically grounded to the frame of the mobile home. Consult and use the National Electric Code for wiring installation.
6. The chimney shall extend at least 3 feet above the part of the roof through which it passes. The top of the chimney is to be at least 2 feet above the highest required elevation of any part of the mobile home located within 10 feet of the chimney.
7. The ceiling/roof thimble assembly shall extend completely through the ceiling/roof cavity of the mobile home to the outermost plane of the roof.

DOORS FOR THE MAGNA-FYRE™

Each Magna-Fyre™ requires a door, provided by Wilkening Fireplace Co, to complete the listed unit. Doors are available in a rectangular or arched configuration with either a black, gold or nickel finish. Ask your dealer for details. To install the door a heat resistant sealing gasket and mounting screws are provided in the door carton. Remove the paper backing from the woven heat resistant gasket, exposing the adhesive backing. Apply this gasket on the unit face on the outside edge of the predrilled holes. Use the 8 screws provided in the door carton to attach the metal frame to the unit face. Do Not operate this unit without doors. Do not use any other door with this unit. If your door wears and needs replacement over time, contact your dealer or Wilkening Fireplace Co. for the appropriate replacement.

WARNING: Fireplaces equipped with doors must be operated with the doors fully open or fully closed. If doors are partially open, gas and flame may be drawn out of the fireplace opening, creating risks of both fire and smoke damage.

HEATED AIR DUCTING OPTIONS

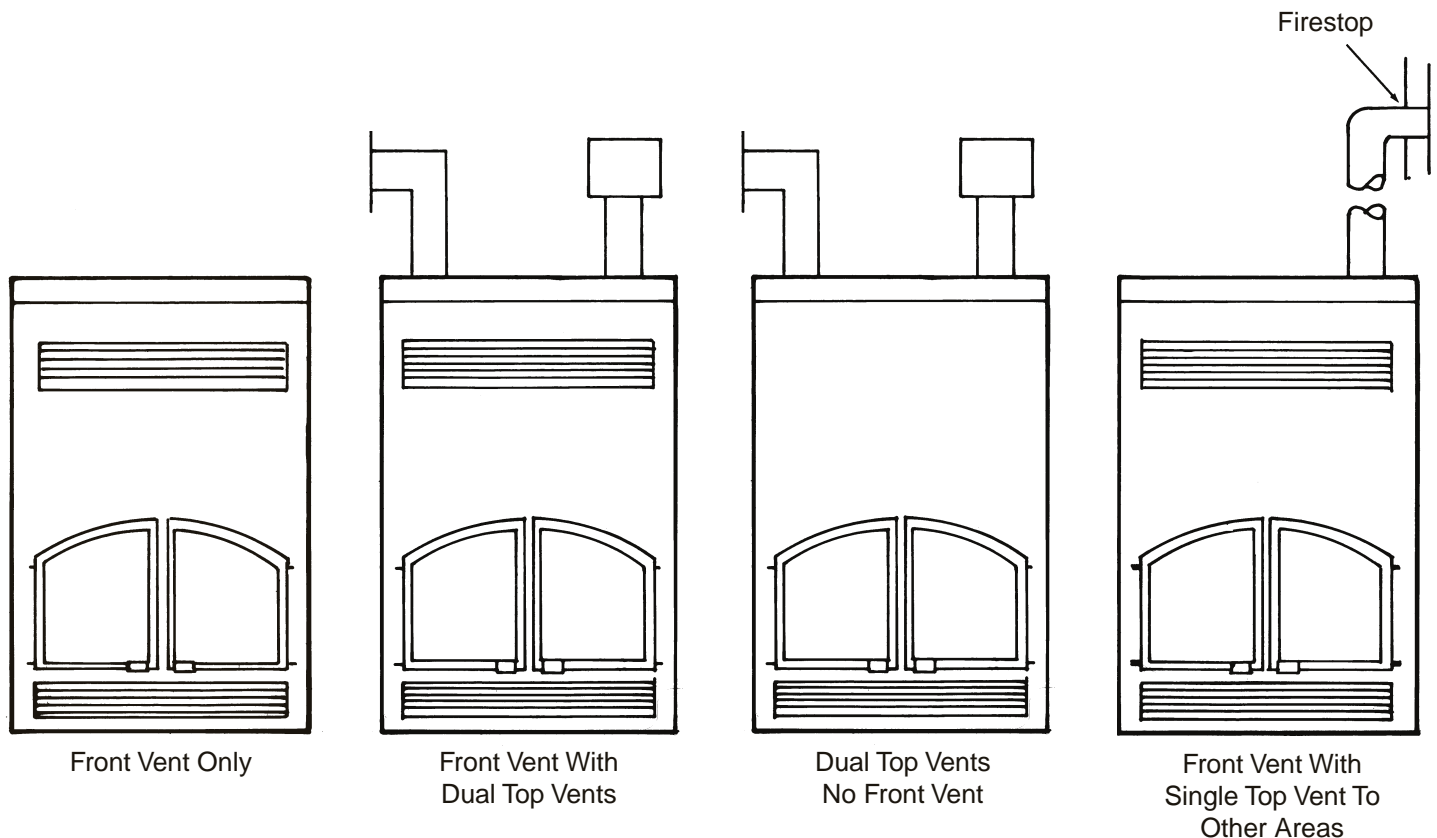
The Magna-Fyre™ comes standard with a heat outlet at the top of the unit. A decorative grill is available to finish this off. This fireplace may also have separate vents, ducted from the pre cut holes in the top of the unit, run into areas above, next to or behind the installation and may be used in conjunction with the vent out the front or with the vent out the front sealed. This fireplace can also be ducted into an existing forced air furnace system or forced air ducted on a separate air distribution system. For additional information on this see the FURNACE DUCTING SECTION OF THIS INSTRUCTION.

When venting heated air out of the unit front vent, a single top vent may be used. If you desire the front vent to be sealed, dual top vents must be incorporated.

To vent from the top of the unit to remote locations; the top vent kit manufactured by Wilkening Fireplace Company must be used. The top vent kit includes two 8" diameter starter rings which attaches the "B" vent to the unit, 2 grill enclosures with standoffs, and 2 grill covers for the enclosures. Eight inch diameter "B" vent listed to UL standards must be used with the top vent kit to complete ducting (see your dealer). A minimum clearance of 6" must remain between the top of the top vent assembly and the finished ceiling. The bottom of the top vent must be a minimum of 6" above a combustible mantle and at least 6" above the unit top. Never allow the "B" vent to create a heat trap. Fins on the grill may point up or down.

To vent heated air to an upper level, the top vent kit must be installed in a side wall of the upper level. Heat can not flow from the fireplace through a floor register. Remote horizontal venting up to 10' from the fireplace is permitted. Use a "B" vent firestop to penetrate any combustible materials. Maintain the "B" vent manufacturers recommended clearances and install according to their instructions.

When using multiple vents with one going to an upper location the highest vent will distribute the most heat. The dual vents may be run to separate rooms creating heat outlet in up to three areas when the front vent is used. Allow adequate return air from remote areas to the room with the fireplace to assure proper air circulation. Closeable vents can not be used.



Facing

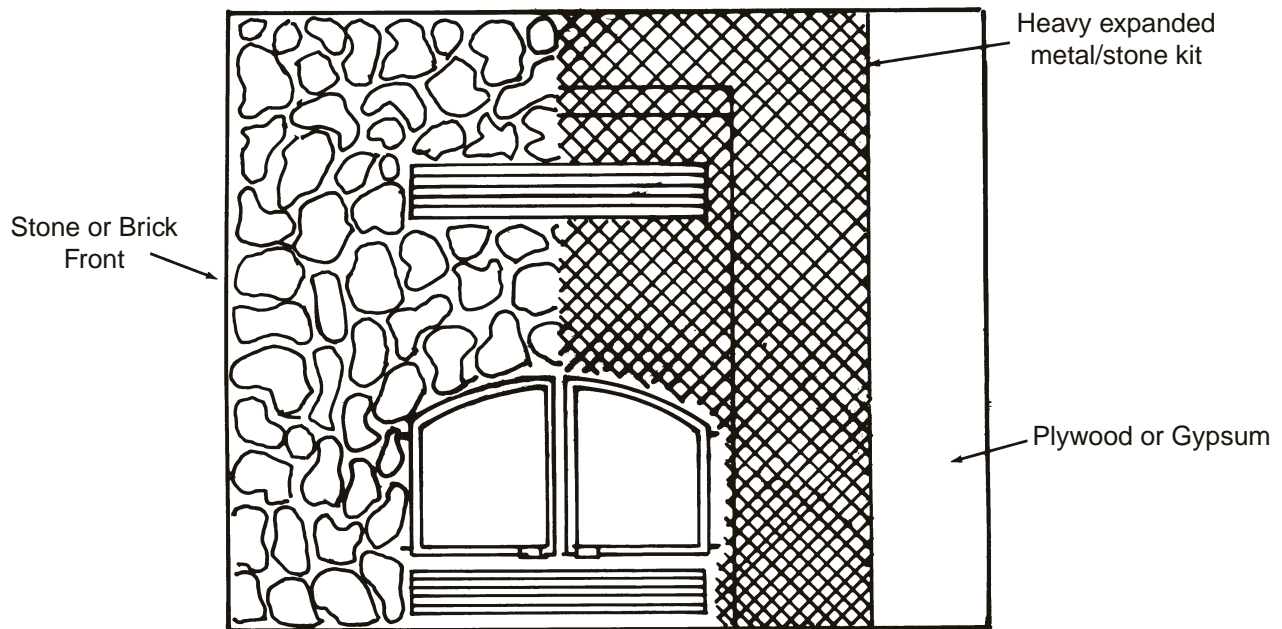
Combustible material may be installed flush to the exterior sides of the fireplace. It may not project in front of or over the steel fireplace face. A piece of Dura Rock or Wunderboard, 8" tall, must cover the area directly above the top of the unit. Sheetrock may touch the sides of the metal face.

Non combustible materials may be placed across the face of the fireplace such as brick, stone, or tile. Two kits are available from your dealer to attach manufactured stone or brick to the face of the fireplace. One allows for heat to exit the face of the fireplace through the front vent, part number SFK 01, the other allows for sealing off the front vent, part number SFK 02.

To use a manufactured facing product, attach one of the stone face kits to the framing structure surrounding the fireplace. Do not attach this to the unit as cracking of the mortar may occur. Apply the manufactured facing taking care to follow the manufacturers instructions.

Note: A tight seal must be created between the metal fireplace face and the facing material to prevent heat from flowing between them.

When installing sheet rock to the sides of the unit face, leave a 3/8" space between the sheet rock and the metal unit sides. Caulk the seams surrounding the fireplace face with 500 degree RTV silicone. Failure to leave this expansion space may cause the sheet rock to crack when the unit expands while heating. Failure to caulk the facing perimeter may allow heat to flow into the chase area.



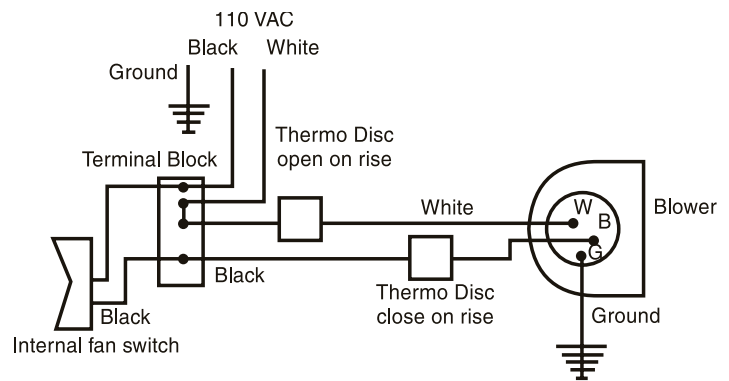
OPTIONAL BLOWER ASSEMBLY

A blower is available to boost the performance of the heat circulation system. This blower is a two speed, twin squirrel cage that delivers 210 CFM free flow air on high and 80 CFM on low.

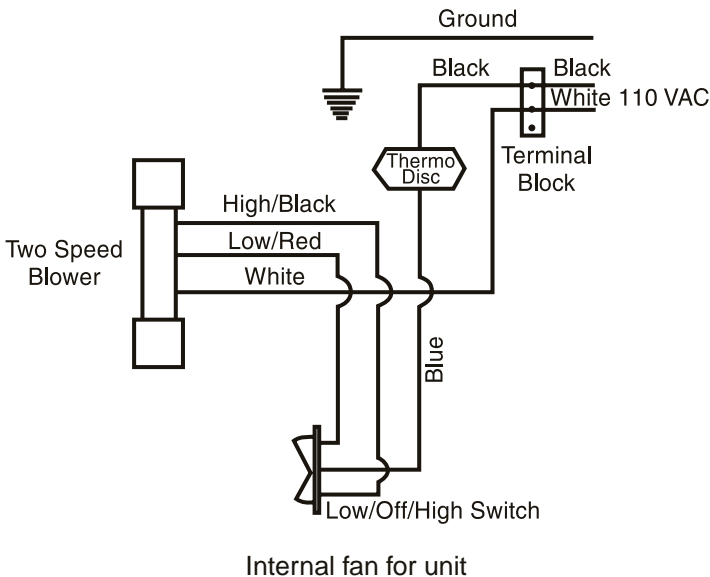
The blower is mounted to the base of the fireplace, behind the lower grill. To access this area simply remove the two screws that hold the lower grill in place. This will allow free access to the area below the fireplace. Magnetic strips, enclosed with the blower, fasten it in place. The wiring diagrams, on the next page, depict the manner in which the wires are to be connected.

Wire nut all connections.

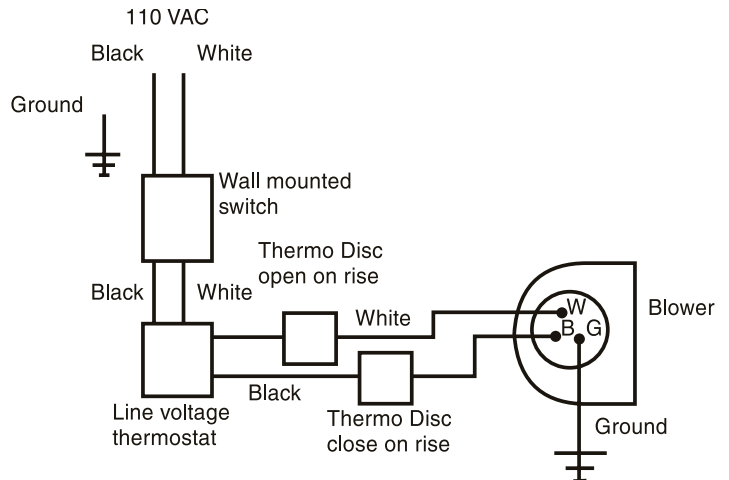
The thermostatic control should be attached to the base of the fireplace, using the magnetic base of the thermo disc control, six inches off center to the right as far toward the face of the fireplace as possible. Make sure that no wire contacts the steel surface of the unit, as melting of the insulation could occur. The steel structure of the fireplace must be grounded to eliminate the risk of electrical shock.



Furnace blower operated by switch on fireplace



Internal fan for unit



Furnace blower operated by a wall mounted switch/thermostat

FORCED AIR FURNACE DUCTING OPTION

Installation of the Furnace Ducting Option must be completed by a licensed HVAC contractor.

WARNING: The heat outlet louver with deflector hood **MUST** be used for this installation. **NEVER** close off or partially block the heat outlet louver or the air inlet louver at the base of the fireplace as overheating of the fireplace will occur, resulting in fireplace failure and a possible fire.

All electrical wiring must be performed by a licensed electrical contractor in accordance with NEC and local codes. Several options are available to control the power applied to this system. Refer to the wiring diagrams located above for the appropriate method. **WARNING:** Disconnect the power supply prior to all electrical work. Lock it in the open position and tag it to prevent unexpected application of power to the circuit. Failure to do so will result in electrical shock and death.

Remove one of the top vent covers from the unit top. This may be on either side but not both. If you are ducting to an air distribution system below the fireplace it is recommended to duct off of the right side of the fireplace as you face it to allow room for the combustion air supply line to enter on the left.

Remove the fiberglass insulation below the cover plate to the size of the one way valve. With the heat outlet louver removed, slide the one way valve, with starter ring attached, through the fiberglass insulation. Fold the locking tabs of the starter ring over the inner cabinet. The one way valve is marked indicating the direction of air flow. The thermo sensor attached to the one way valve must be positioned toward the face of the fireplace. **WARNING:** The one way valve must be placed in the vertical position, in the above specified location **only** (SEE DRAWING # DBS 1 and DBS 2 on page 13). **Never** mount the one way valve in a horizontal position.

Attach the 8" 90 degree elbow with high limit switch attached, and furnished in the kit, to the one way valve with three drill screws. The limit switch must be positioned at the top most portion of the elbow if rotation of the elbow is required for installation (see drawing #DBS1 on next page). To connect the furnace blower to an air distribution system located above the fireplace, attach the blower assembly provided to the 8" 90 degree elbow, installed in the previous step, with three drill screws and fasten the blower assembly bracket, attached to the blower housing, to the framing members of the chase with screws.

To connect the furnace blower to an air distribution system located below the fireplace, attach the additional 8" 90 degree elbow to the 8" 90 degree elbow installed previously with three drill screws.

Use the wall pass thru provided to exit the chase area leaving a minimum 1" space between the 8" single wall metal pipe and any combustible material. The pass thru area must be a 10" x 10" minimum framed opening.

USE ONLY 8" DIAMETER SINGLE WALL METAL PIPE INSIDE THE CHASE AREA (see drawing #DBS 2 and DBS 3 on next page).

Maintain a minimum 1" space from the single wall metal pipe to any combustible materials. To reduce blower noise and eliminate heat loss from the single wall metal pipe, wrap these with unfaced fiberglass insulation.

WARNING: Never connect the hot air outlet of this system to the cold air return of any other central furnace system.

When connection is done to a hot air duct or hot air plenum of a central furnace heating system, consult a licensed HVAC contractor (**see drawing # DBS 5 and DBS 6 next page**).

After installation, check to verify the air temperature of the duct downstream from the connection does not exceed 250 degrees F. and that the maximum static pressure with both the furnace blower and the fireplace furnace blower on does not exceed 0.5" water column.

The air distribution system and the total of all branch air lines **MUST EQUAL 50 SQUARE SURFACE INCHES OR GREATER**. If a 6" diameter branch line is used then a minimum of two lines is required. If 5" diameter branch lines are used a minimum of three will be required to achieve the 50 sq. in. requirement. Non closeable registers or grills with a minimum of 50 sq. surface inches open must be used for warm air exhaust. Refer to sample diagram #DBS 4 on next page.

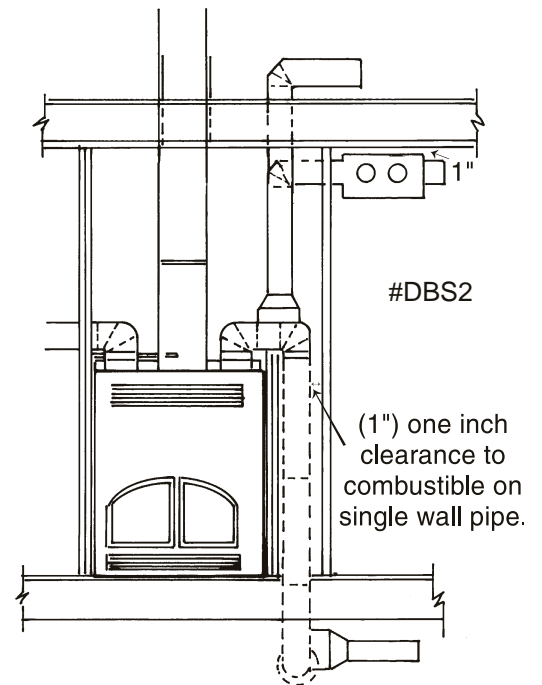
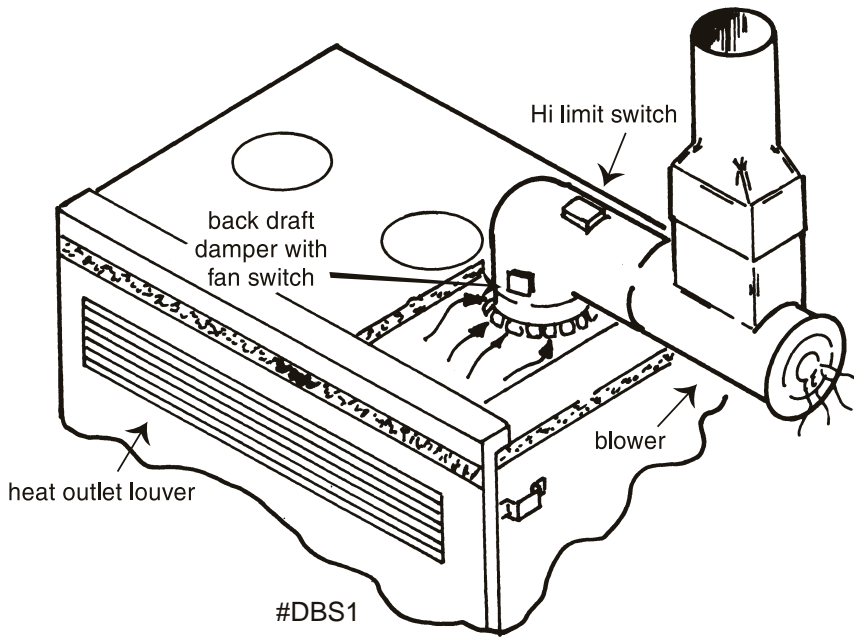
The maximum duct length for the entire run is 50 feet. At .04 static pressure a 12 percent loss in air volume will occur. Class 1 insulated, plastic air duct that is U.L. listed for 250 degree F. can be used outside of the chase area of the fireplace.

Locate the blower in an area that is accessible for servicing. If the blower is located inside of the fireplace chase, an access panel must be provided. When the blower is located inside of a sealed space, use the 10" x 10" vent provided to allow air for cooling the blower to enter the sealed space. To mount this vent, frame an 8" x 8" opening and mount the vent to the frame material. Do not mount his cooling vent on the exterior of the home or into an unheated space as cold air will then enter the chase, causing cold transfer into the room.

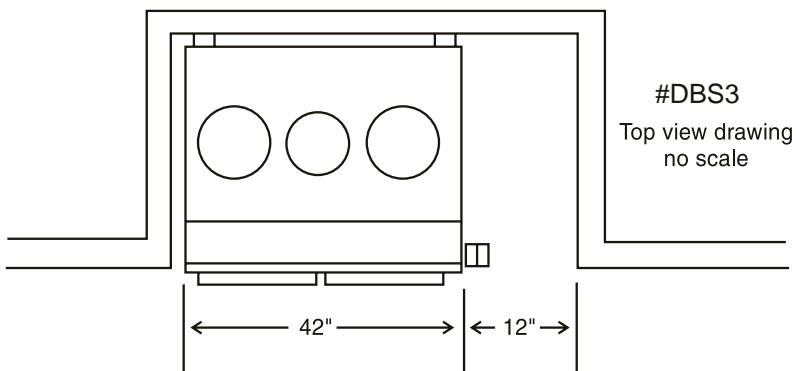
WARNING: When this blower system is in operation it will remove air from the room that the fireplace is located. If this room can be closed off with a door, a return air grill that has a fixed open area of at least 100 square inches must be installed to allow for return air to flow back to the room with the fireplace. Failure to allow an adequate return air supply to the fireplace will cause the unit to smoke back into the room when the door is open.

Parts included with the Furnace Ducting Kit:

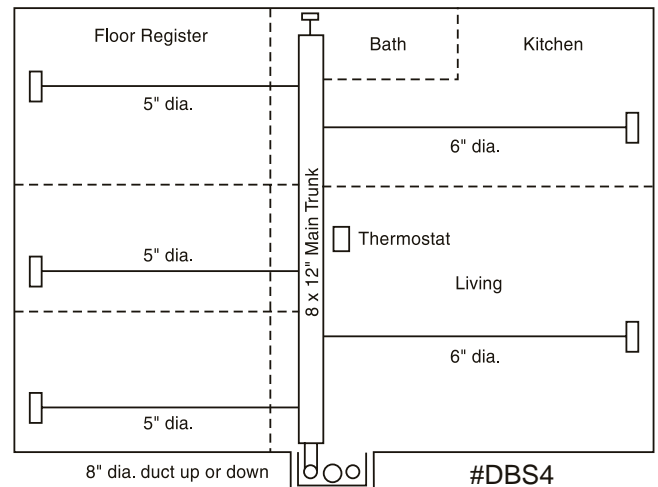
- 1 - on/off/off blower switch spdt 125 V, 15 amp (built in to lower louver)
- 1 - 8" one way valve with starter ring and thermo sensor attached
- 1 - 8" 90 degree elbow with high limit switch attached
- 1 - 8" 90 degree elbow, single wall, 24 gauge stove pipe
- 1 - 110 Volt, 3.2 Amp blower rated at 760 CFM with starter ring attached
- 1 - 8" wall/ceiling pass thru
- 1 - 19H-10" x 10" fixed open side wall grill



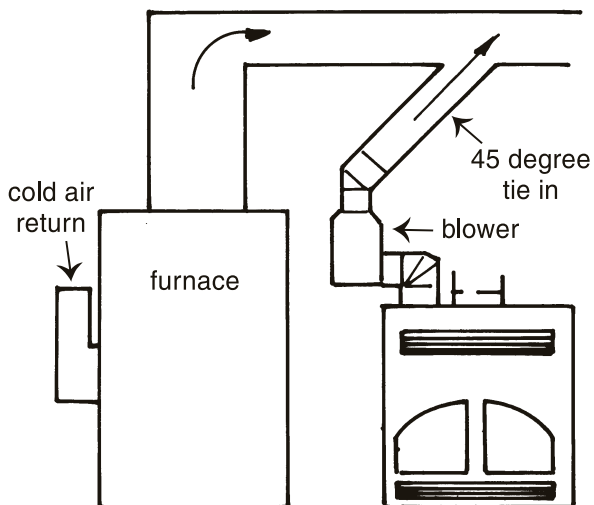
For complete framing dimensions
consult installation instructions



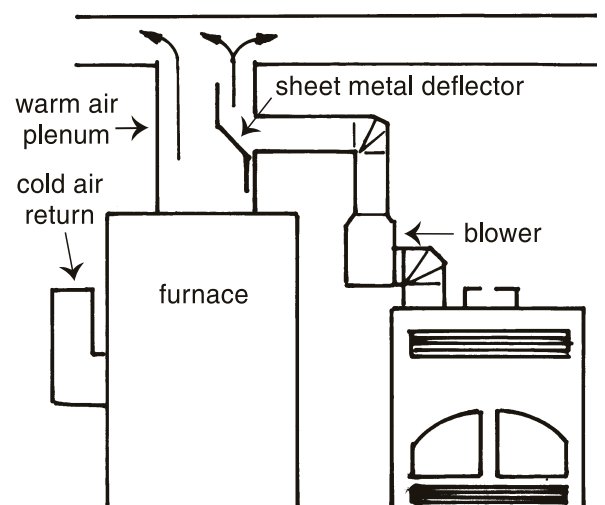
Shows 3418 unit with required space on side to allow
for installation of Duct blower system.



This is a example of your air duct system. Consult HVAC contractor for your
particular requirements.



#DBS5
no scale



#DBS6
no scale

REFRACTORY LINER AND BAFFLE ASSEMBLY

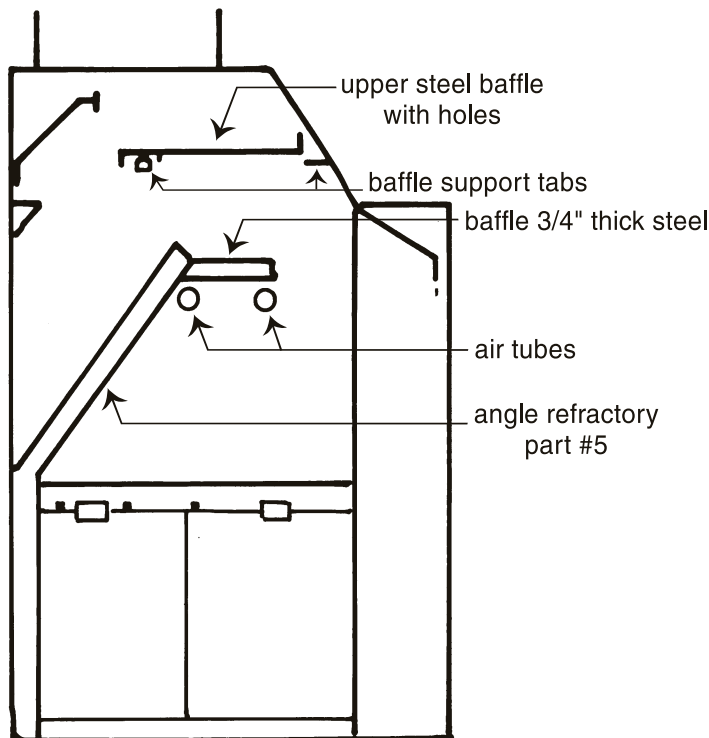
The Magna-Fyre™ utilizes a super reflective inner lining of refractory. These panels protect the metal surfaces and increase the operating temperature of the burning chamber.

The diagram below shows the placement of this liner and upper baffle. Care must be taken when handling these pieces not to damage them. Do not operate this unit without all the baffles and inner liner in place as overheating of the chimney connector and components may occur.

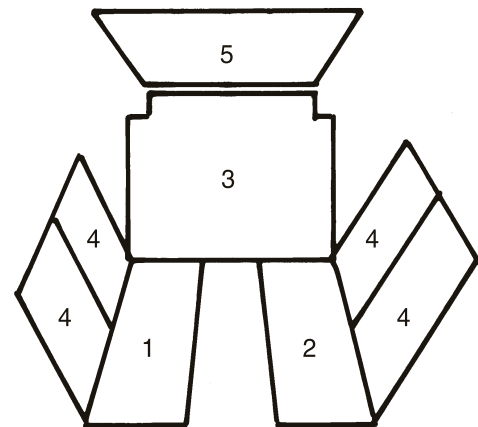
Once in place the refractory liner is supported by brackets. If a hair line crack occurs in the liner and it remains in place, it does not have to be replaced. Replacement of a refractory is necessary if it becomes damaged to the point of falling loose or has gaps between it.

Install the steel baffle with holes notched into it in the upper throat of the fireplace. This baffle is placed on the metal tabs which extend into the upper area, above the secondary combustion air tubes. To install the refractory liner and baffle assembly, install the two bottom refractory pieces (part #s 1 and 2) first. Position the back panel in place (part # 3). Set the four side pieces in place (part # 4). Place the refractory

panel (part # 5) over the top edge of the air tubes and slip into place. Position the 3/4" thick baffle plate in place on top of the dual stainless steel air tubes placing the stops welded to the base of the baffle between the two tubes. (See the diagram on the following page for placement of the refractory and baffle assemblies).



Baffle Placement
Side View Magna-Fyre™ Zero Clearance



Refractory Liner Placement

Painted and Plated Surfaces

The Magna-Fyre™ is painted with a 1200 degree high heat paint. This paint is an open cell material that allows for heating and cooling without cracking or chipping. During the first several fires this paint will “cure”, giving off an odor with some visible smoke.

Due to the “open cell” nature of this paint, moisture can impregnate the surface causing rust to form. If this occurs, lightly sand the surface and repaint with Stove Bright satin black paint available from your dealer.

Gold or Nickel plated surfaces require no polishing to retain their luster. If a plated surface is polished it may remove the plating, exposing the base materials below. To maintain plated surfaces simply wipe them with a damp, soft, cotton cloth.

Remove all plated finish items and store them in a safe location during installation to insure that they do not become damaged. Sheet rock compound will discolor any plated surface.

INSTALLATION OF THE MAGNA-FYRE™

1. Select the appropriate location for the fireplace, see page 5.
2. If a raised hearth is used, build the platform for the unit to sit on and frame the structure/chase; cutting or creating the openings required for air supply, chimney routing and the top venting option if needed. See pages 5, 6, 7, 8, and 9. If insulation is needed in the chase, do so now. Siding or sheet rock may be applied to the sides and back wall of the enclosure.
3. Install the outside air assembly into the chase, see page 6.
4. Move the fireplace into place and connect the outside air supply to the unit. See page 7.
5. Install the chimney using the chimney manufacturers recommended practices and components. See page 6 and the instructions enclosed with the chimney.
6. Install top vent kit or furnace duct blower components if applicable, see pages 8 and 9.
7. Remove the lower grill by removing the two screws holding it in place. Route a power supply into the junction box of the fireplace for power for the on board blower and/or furnace duct blower. All connections and materials must conform to the National Electric Code. Power requirements are 110VAC with a 10Amp supply. If a blower is added to this installation do so now, see pages 10 and 11 for the on board blower and page 11 for furnace ducting electrical connections. Reinstall the lower grill.
8. Install the doors see page 8.
9. Finish facing of the fireplace and hearth area, see page 10.
10. Install the upper baffle and refractory panels, see page 14.
11. Install the heat outlet louver/louvers, if used, by inserting the two screws, enclosed with each louver assembly, into the outlet bracket and tighten.
12. **NOTICE TO INSTALLER: SAVE THESE INSTRUCTIONS FOR FUTURE USE.** These instructions include operation instructions, maintenance information and the customers warranty. Leave this booklet inside of the unit for the consumer.

CARE AND MAINTENANCE

CREOSOTE FORMATION AND THE NEED FOR REMOVAL

When wood is burnt slowly, it produces organic vapors and tar which combine with moisture that is expelled from the wood and forms a black deposit called creosote. The creosote forming vapors condense in the relatively cool flue liner of a slow burning fire. As a result, creosote residue accumulates. When ignited, creosote burns extremely hot. Excessive accumulation of creosote, if ignited can cause overheating of the chimney, chase and fireplace structure. Overheating is a fire hazard. Creosote accumulation can be minimized by burning hot fires, rather than a slow smoldering fire and by using only well seasoned, air dried fuel. Any wood that “sizzles” in the fire can produce excessive creosote formation in the flue and should not be used.

Regular chimney maintenance combined with the proper burning techniques will prevent chimney fires. Keep the chimney area, cap and flue lining free of build up. Do not allow more than 1/16th inch to accumulate between cleanings. Cleaning intervals will depend on individual use practices.

For the first year, we recommend monthly inspection and cleaning if needed. This will allow you to learn how your burning style affects the formation of creosote in the flue. Have your chimney professionally cleaned. If you choose to maintain it yourself, use a stiff plastic brush. Metal brushes will damage the stainless steel liner due to scratching of the inner surfaces. Prior to cleaning the chimney, remove the two steel baffles located in the throat of the fireplace and the angled refractory so any creosote that falls into the system during cleaning falls down to the base of the fireplace. Remove the creosote from the firebox prior to starting the next fire. Creosote left inside the fireplace will burn at an extremely high temperature and may damage the fireplace or chimney system.

IF YOU HAVE A CHIMNEY FIRE

If a chimney fire occurs: close the combustion air control (slide it toward the left), verify that the doors are fully closed, summon the fire department, alert your family of the possible danger, and evacuate the premises. A chimney fire is a serious condition that may result in loss of property and life.

Do not use the fireplace if you suspect that you have had a chimney fire until the entire system has been inspected by a certified sweep or others qualified in the area of chimney/fireplace safety.

ASHES

Removal of ashes must be done when the fire is out and the ash is cold. A special ash caddy is available from your dealer to ease ash removal. Always empty ash into a metal container with a lid. Close the lid tight and set it on a non combustible surface well away from any combustible material. Hot coal in the ash can remain potentially dangerous several days after removal. Do not store ash in your home. Never use a cardboard box for ash removal.

CARE OF THE GLASS PANELS

The glass used in the Magna-Fyre™ fireplace is a 1400 degree ceramic material. If, for some reason, it ever breaks, replace it with a similar material, as regular glass or tempered fireplace glass can not withstand the intense temperature that the fire creates. Contact your dealer for proper replacement parts.

To clean the glass, use an ammonia based cleaner, locally available fireplace glass cleaners or Speedy White. Contact your dealer or Wilkening Fireplace Co. to obtain Speedy White glass cleaner. Take care not to apply the cleaner in a manner that it contacts painted areas of electroplated surfaces, as discoloration may occur.

Use a soft cotton cloth or paper towel to remove the smoke/cleaner residue. Do not scrape the glass with razor blades or abrasive pads. This will damage the glass and may cause failure. Clean the glass only when the unit has cooled to room temperature.

HEAT OUTPUT

THE MAGNA-FYRE™ fireplace generates the greatest BTU output when the combustion air supply is fully open. This, although, is the least efficient mode of operating the unit. When burning this unit in the “wide open” mode, use only hardwood for fuel as small rapidly combustible material and soft wood will generate extremely high temperatures which may damage the inner firebox.

The most efficient method of operation is to have the air supply control set between 1/4 and 1/3 open. The air control is open when slid toward the right and closed to the left. This will supply the

proper air mixture for combustion and create adequate heat transfer to maximize the efficiency. The exact setting needed to create this situation will depend on many factors such as chimney height, atmospheric pressure, and fuel. The MAGNA-FYRE™ is operating at peak performance when the flames burn clean and clear.

Closing the combustion air inlet completely will create the longest burn times but may result in creosote formation on the glass and in the chimney. The flames will not go out completely when the control is closed but a change in the flame pattern will be noticed. This is due to unregulated secondary air that enters the upper tubes to sustain ignition of exhaust gasses. Never close the combustion air supply when the firebox is relatively cool and a large amount of fuel is in the firebox as excessive creosote will be developed due to low exhaust temperatures.

REFUELING

When adding additional fuel to the fire it is important to maintain a hot firebox temperature. This is achieved by maintaining a good coal bed and not stacking or overloading the unit. For several minutes after refueling it is recommended to open the combustion air supply fully to allow the fuel to ignite. Failure to do so can create a smoldering, smoky fire. When the fuel ignites and has been burning for several minutes, the air control may be returned to the desired setting to achieve the desired burn times and heat output. Maintaining a hot firebox will minimize smoke on the glass and creosote in the chimney.

BACK SMOKING

To minimize smoke from entering the room when refueling, it is recommended that the combustion air control be opened for 30 seconds prior to opening the door. This will improve draft on the chimney and “freshen” any remaining fuel.

Excessive amounts of fuel or wet fuel will also create the potential for back smoking when the door is open due to over capacity of burning fuel or low draft due to low firebox temperature.

Chimney blockage due to foreign objects (leaves, nests, etc.) or excessive creosote in the flue will minimize draft of the chimney and can be a cause of poor draw.

Lack of chimney height will also contribute to poor draw. The chimney must extend at least 2' taller than any roof or structure that is within 10' of it. When this unit is installed with offsets, it may also be necessary to compensate for the decrease in draw with additional chimney height.

Open both doors at the same time. This will minimize the vortex action created by the air flowing into the fireplace, and will reduce the possibility of back smoking once the doors have been opened fully.

If the fireplace has been operating properly and all of a sudden starts to smoke, check that the chimney cap has not become plugged or that loose creosote has not fallen down the chimney and is obstructing the holes in the upper most baffle.

ANNUAL INSPECTIONS

Every fireplace should have an annual inspection before the first fire of the year to verify that all components are working properly and that the chimney is ready for use. We recommend contacting a Certified Chimney Sweep for this yearly inspection even if you clean your own chimney during the year. This will assure you that there has not been any breakdown in components or blockages that could result in a fire, as trained professionals, they can fully access your system.

STARTING THE FIRE

THE FIRST FIRE

The first four or five fires should be small, short in duration (less than one hour) and not contain rapidly combustible material such as building scrap or siding. **The first fire should be especially short as this will remove most of the moisture in the refractory liner.** The first several times of use will produce a slight odor or smoke as the painted surfaces are “curing”. For this reason the room should be well ventilated during the initial fires. During the curing process, the glass may develop creosote stains as the fire is not hot enough for it to “self clean”.

STARTING THE FIRE

To start a fire, place several sheets of newspaper crumpled into balls in the center of the firebox. Lay two, small diameter, short logs on each side of the paper with the cut end facing you. Build the fire directly on the base of the unit. Do not use a grate or andirons to elevate the fire. Place a small amount of dry kindling on top of the paper and logs, in a criss cross fashion, leaving room for air to flow between them. Light the paper and leave the door ajar for several minutes. This will induce a draft in the chimney and start the wood burning.

Open the combustion air supply, sliding the control lever to the right. Place additional kindling on top of the burning matter and close the doors. Once this fuel load is about 1/2 consumed, add several pieces of cord wood up to 4" in diameter. Leave the air supply fully open until the cord wood has become fully ignited.

Once the unit has been heated, larger cord wood can be added. For the cleanest burn and most active fire, it is recommended that the wood be placed in a criss cross fashion to allow air to enter under the fire. Adjust the air supply to the desired burning rate.

Reduced air for combustion and tightly stacked wood will result in slower fires and some smoke on the glass panels.

COMBUSTION CONTROL

Control of the burning rate is achieved by adjustment of the air supply control located below the door on the left side of the unit. No chimney damper is required with this appliance due to the air sealed doors and positive fit of the air supply control. Precise control over the burn rate can be achieved by regulation of the air supply control.

When not in operation, the air supply should be closed (slid to the left). This will minimize air flow up the chimney. Always open the combustion air supply before opening the door to refuel the fire for approximately 30 seconds. This will minimize back drafting of the fire into the home by developing additional chimney flow prior to opening the door.

NEGATIVE PRESSURE IN THE HOME

With the advent of tighter homes, it has become apparent that the lower levels of these homes will have a lower pressure level than the upper areas. This is caused by the “stack effect” of the house (the structure acts like a chimney). To overcome “stack effect”, close any windows in levels above the fireplace installation and open a window on the level the fireplace is installed. The best window to open is one that the wind is blowing toward. With no fire in the fireplace the chimney should still draw air from the room

into it when the doors are opened. If air drops down the chimney and enters the home when the door is opened a negative pressure exists in the home. To overcome this when starting a fire, crumple several pieces of newspaper and place them in the firebox and light, closing the doors with the combustion air supply open. The heat of the fire will create draw on the chimney, which will help overcome the pressure difference between the room the fireplace is located and the chimney.

IMPORTANT

1. Never block the air circulation grills, either the inlet or outlet. This will create overheating of the structure and a possible fire hazard.
2. Never start a fire using gasoline, fuel oil or other rapidly combustible fuels.
3. Do not burn coal, the sulfur will deteriorate the fire chamber.
4. Contain the fire behind the internal log retainer. Accidental spillage of burning fuel may occur when the door is opened if fuel exists in front of the retainer.
5. Never load the fireplace with cardboard, paper or rapidly combustible material. This will cause overheating of the steel structure and a possible fire hazard.
6. Do not allow this unit to smolder or burn without flame. This will create excessive creosote formation which may lead to a chimney fire.
7. Always have a fire extinguisher, rated for multi purpose, readily available near the fireplace in case of a dangerous condition.
8. Failure to use or install this fireplace as stated in this manual will void all warranties and may create a dangerous condition which may result in loss of property or life.
9. Never burn treated or salt water contaminated wood.
10. Never plug the outside air supply. Unlike “normal” zero clearance fireplaces, the Magna-Fyre™ fireplace can not leak cold air into the home due to our totally sealed air connection and air tight doors on the unit.
11. Properly instruct all users prior to their operation of this unit.
12. Never use this unit with broken or missing firebrick panels.
13. Do not use grates or andirons to elevate the wood. Burn the fires on the bottom of the unit.
14. **SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.**

Magna Fyre™

10 YEAR LIMITED WARRANTY

Wilkening Fireplace Co., Inc. (hereinafter Wilkening), the manufacturer of the MAGNA-FYRE™ unit, (hereinafter unit), hereby extends the following warranty:

1. Wilkening warrants that the control rods and knobs, gasket seals and refractory liner will be free from defects in materials and workmanship for a period of one (1) year from the date of purchase.
2. Wilkening warrants that the door frame and all metal parts and components will be free from defects in materials and workmanship for a period of ten (10) years from the date of purchase.
3. Upon proof that any metal parts or components are defective in either materials or workmanship under conditions of normal use and service, Wilkening agrees to the following:
 - a. If a defect in workmanship or material is shown during the first year, Wilkening shall, at their option, either replace or repair the same at no cost to the original retail purchaser.
 - b. In the second (2nd) through the fifth (5th) year, Wilkening shall furnish a replacement part or parts at no cost to the original retail purchaser.
 - c. In the sixth (6th) through the tenth (10th) year, Wilkening shall furnish a replacement part or parts at 50% of the then current retail price to the original retail purchaser.

Wilkening shall not be responsible for any labor costs, postage, freight, or other costs or expenses, including, but without limitation, any indirect, incidental or consequential damages.

Wilkening does not warrant any component or part included in the unit that is manufactured by anyone else. This limitation would apply to, but is not limited to, painted or electroplated surfaces.

Wilkening makes no representations or warranties, express or implied, except as stated herein. All implied warranties of any nature, including, but not limited to, any implied warranty of merchantability or fitness for purpose, are hereby disclaimed.

Wilkening's sole obligation for the unit is as contained in this limited warranty and any representations or warranties, whether express or implied, made by any dealer are not binding on Wilkening.

No warranty of any sort is made as to installation, labor, materials or parts adopted for use with this unit.

To Validate This Warranty, Complete This Form and Return to
Wilkening Fireplace Co., Inc., 9608 State 371 NW, Walker, MN 56484

NAME _____ INSTALLED BY _____

ADDRESS _____ DEALER'S NAME _____

CITY & STATE _____ ADDRESS _____

SERIAL # _____ CITY & STATE _____

I fully understand and agree to the terms of this warranty.

Signature _____

Alterations, improper installation, abuse, neglect, or over firing of the unit will void any warranty whether express or implied.

A chimney cap must be installed to validate this warranty.

The limited warranty is made only to the original retail purchaser and is not transferable or assigned to any subsequent purchaser or owner.

This warranty is voidable at the option of Wilkening in the event that the unit is installed outside the continental United States or Canada or is removed from the place of original installation.

Wilkening reserves the right to examine any claimed defective unit, part or component thereof, under this limited warranty in its own place of business located at Walker, MN. Furthermore, since Wilkening has no control over the manner in which the unit is installed it cannot assume responsibility for such items as inadequate draft or similar problems caused by natural or man made obstructions.

This unit must be installed in accordance with all building codes and regulations and the purchaser and/or user must determine the suitability of the unit in light of these applicable codes and regulations in advance. Each purchaser must also determine, in advance, the suitability of each unit for their specific needs.

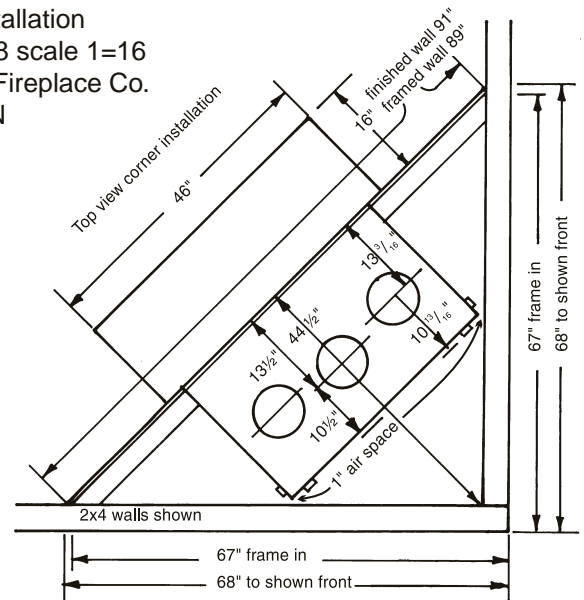
THERE ARE NO WARRANTIES BEYOND THOSE CONTAINED HEREIN. EXCEPT TO THE EXTENT PROVIDED BY LAW, THERE ARE NO OTHER EXPRESS OR IMPLIED WARRANTIES MADE BY WILKENING APPLICABLE TO THIS UNIT INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY, USE, OR FITNESS FOR A PARTICULAR PURPOSE. EXCEPT FOR THE WARRANTIES STATED HEREIN THE PURCHASER TAKES THE UNIT "AS IS".

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. CERTAIN STATES DO NOT ALLOW LIMITATIONS ON THE LENGTH OF TIME OF AN IMPLIED WARRANTY. FURTHERMORE, CERTAIN STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF CERTAIN TYPES OF DAMAGES.

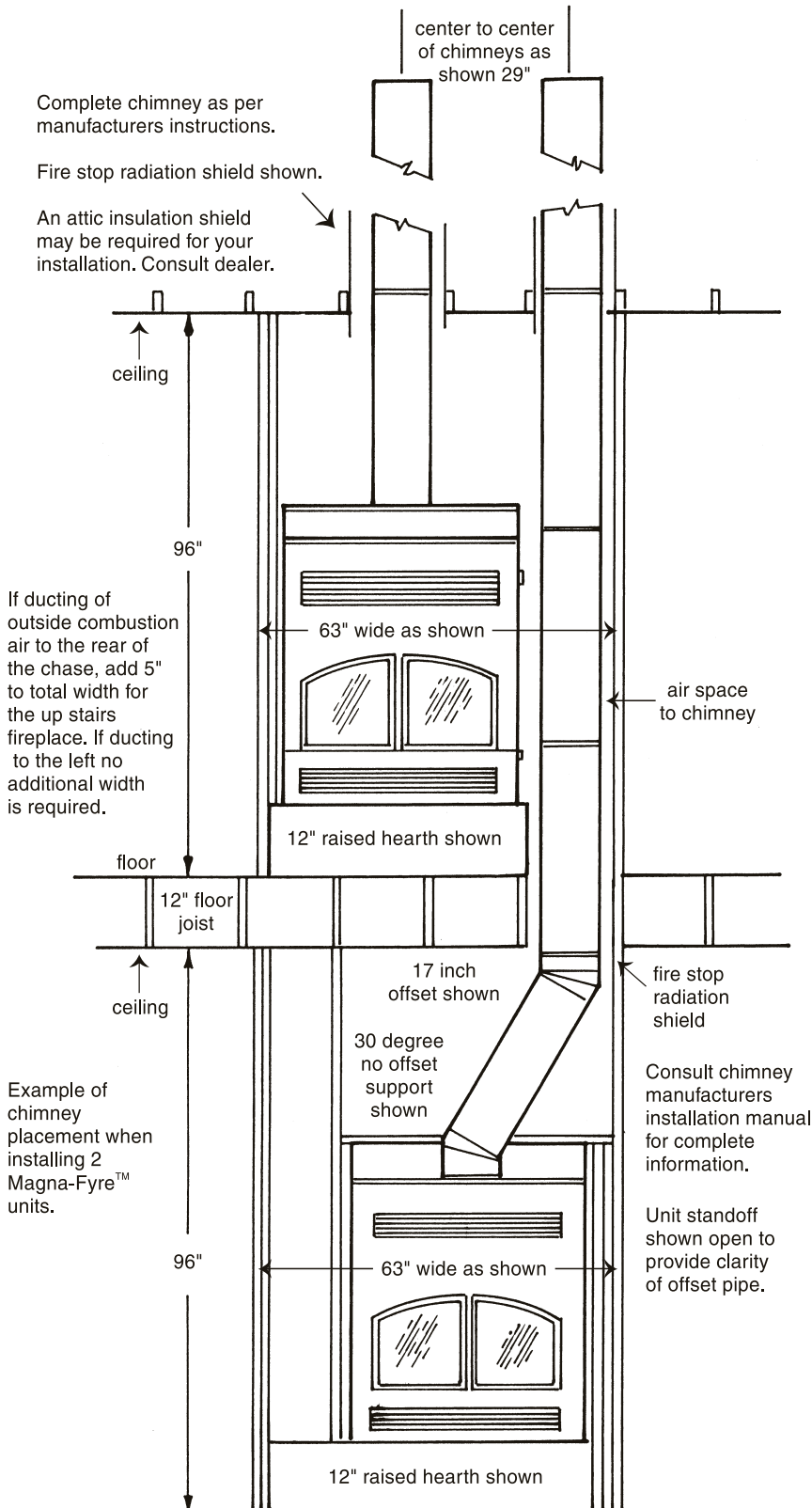
IN ORDER FOR THE LIMITED WARRANTIES GRANTED HEREIN TO BE EFFECTIVE, A COMPLETED OWNER'S REGISTRATION CARD MUST BE RETURNED TO WILKENING WITHIN SIXTY (60) DAYS OF THE PURCHASE OF THE UNIT DESCRIBED HEREIN.

IN CASE OF QUESTIONS, OR IN ORDER TO ASSERT ANY RIGHT GRANTED HEREIN, YOU MUST CORRESPOND DIRECTLY WITH WILKENING AT THE FOLLOWING ADDRESS: Wilkening Fireplace Co., Inc., 9608 State 371 NW, Walker, MN 56484.

Corner installation
 Model 3418 scale 1=16
 Wilkening Fireplace Co.
 Walker, MN
 by Don W.



CONSTRUCTION NOTES



Consult chimney manufacturers installation manual for complete information.

Unit standoff shown open to provide clarity of offset pipe.

