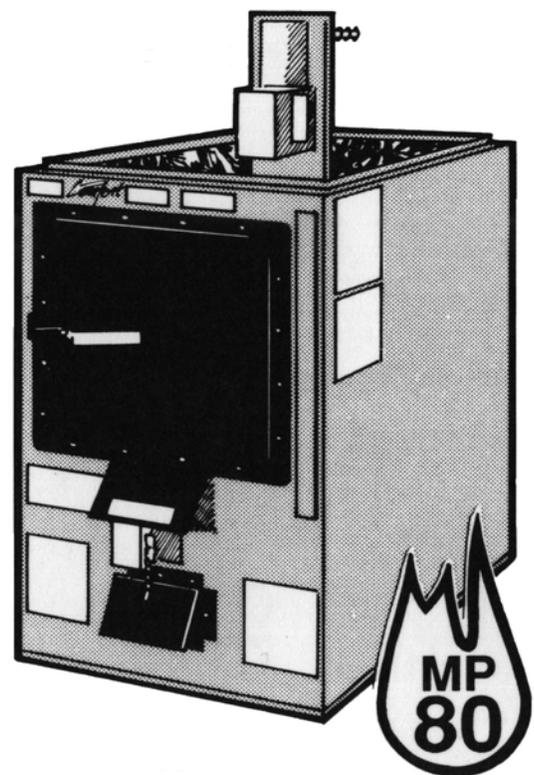


MP80

INSTALLATION AND OPERATION MANUAL



**MP80 SOLID FUEL
FURNACE FOR USE AS
AN ADD-ON TO OIL, GAS OR
ELECTRIC FURNACE
OR AS AN INDEPENDENT
FORCED AIR WITH BLOWER**



READ THOROUGHLY AND COMPLY WITH ALL LOCAL CODES AND REGULATIONS

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WARRANTY

BLAZE KING WOOD LIMITED WARRANTY

Blaze King and its respective brands extend the following warranty for wood fired appliances purchased from an authorized Blaze King dealer and installed in the United States of America or Canada. Warranty starts with date of purchase by the original owner (End User) except as noted for replacement parts.

| Warranty Period | | Components Covered | |
|--|--------|--------------------|--|
| Parts | Labor | Wood | |
| 1 Year | | X | All parts, materials and surface finishes (flaking and peeling) Subject to Conditions, Exclusion, and Limitations listed |
| 2 Years | | X | Fan assemblies and motors, thermal sensors, catalytic thermometer , bi-metallic thermostat assembly |
| 5 Years | 2 Year | X | Firebox & Heat Exchanger, Bypass Door Steel Components |
| 6 Years | | X | Catalyst Combustor (see Conditions, Exclusions, and Limitations) |
| 1 Year | | X | Other Replacement Parts |
| See Conditions, Exclusions, and Limitations. | | | |

Blaze King Wood Limited 5 Year Warranty

Blaze King is the manufacturer of the Blaze King line of heating products. At Blaze King, our commitment to the highest level of quality and customer service is the most important thing we do. Each Blaze King stove is built on a tradition of using only the finest materials and is backed by our limited warranty to the original purchaser. With Blaze King, you're not just buying a stove; you're buying a company with years of unequalled performance and quality.

Limited Six (6) Year Warranty:

The CATALYTIC COMBUSTOR is under warranty by Blaze King for six (6) years from the date of original retail purchase. The purchaser shall pay the following share of the then current retail price for the combustor: The first three (3) years no charge, 4th year 60%; 5th year 70%, 6th year 80%. The Combustor must be returned to your dealer along with a completed COMBUSTOR FAILURE REPORT and original proof of purchase document.

Limited (5) Year Warranty:

Under this warranty, Blaze King covers the stove body and accessories against defects in materials and workmanship, for part repair or replacement for the first five (5) years *** to the original purchaser. This Warranty covers: All Steel firebox components against defects in material and workmanship. Please see the exclusions and limitation section below as certain restrictions and exclusions apply to this warranty.

Limited Two (2) Year Warranty:

Under this warranty, Blaze King covers, fan assemblies and modular thermostat against defects in materials and workmanship, for part repair or replacement and limited labor for the first two (2) years to the original purchaser. Please see the exclusions and limitation section below as certain restrictions and exclusions apply to this warranty.

Limited One (1) Year Warranty:

Under this warranty, Blaze King covers all parts and materials against defects in materials and workmanship including exterior paint finishes, for part repair or replacement and limited labor for the first year to the original purchaser. Please see the exclusions and limitation section below as certain restrictions and exclusions apply to this warranty.

How the Warranty Works

1. All warranties by the manufacturer are set herein and no claim shall be made against the manufacturer on any oral warranty or representation. All claims under this Limited Warranty must be made in writing by your dealer.
2. Any stove or part thereof that is repaired or replaced during the Limited Warranty period will be warranted under the terms of the Limited Warranty for a period not exceeding the remaining term of the original Limited Warranty or six (6) months, whichever is longer.
3. For any part or parts of this stove, which in our judgment show evidence of defects, Blaze King reserves the option to repair or to replace the defective part(s) through an accredited distributor or agent, provided the defective part is returned to the distributor or agent, transportation prepaid, if requested.
4. If you discover a problem that you think may be covered by the Limited Warranty, you MUST REPORT it to your Blaze King dealer WITHIN 30 DAYS from the date the problem was first detected, giving them proof of purchase and the date of purchase. The dealer will investigate the problem and work with Blaze King to determine whether the problem:
 - a) Is covered by the Limited Warranty or
 - b) Can be fixed in your home or does the product need to be returned to Blaze King for repair.
5. If Blaze King determines that the stove needs to be returned to Blaze King for repair, the customer has the responsibility and the expense of removing it from their home and shipping it to Blaze King. If the problem is covered by the Warranty, Blaze King will repair or replace the item at their discretion and the customer will be responsible for return shipping and re-installation in their home.
6. If the problem is not covered by the Limited Warranty, the customer will be responsible for all repair costs, as well as all storage, shipping and the cost of removing and re-installing the stove.

If you are not satisfied with the service provided by the Blaze King dealer, write to Blaze King at the address listed on the last page of the Owner's Manual. Include a copy of the original purchase invoice and a description of the problem.

Exclusions and Limitations:

1. This Warranty does not cover tarnish, discoloration or wear on the plated surfaces. Painted finishes will change colour after initial firing and will continue to change through the lifetime of the stove. This is normal occurrence for all high temperature coatings.
2. This Warranty does not cover gasket material or firebrick.
3. Blaze King strongly recommends installation by a certified installer. Failure to comply may adversely affect coverage under the terms of this warranty. This Limited Warranty covers defects in materials and workmanship only if the product has been installed in accordance with local building and fire codes; in their absence refer to the owner's manual. If the product is damaged or broken as a result of any alteration, wilful abuse, mishandling, accident, neglect, or misuse of the product, the Limited Warranty does not apply.
4. The stove must be operated and maintained at all times in accordance with the instructions in the Owner's Manual. If the unit shows signs of neglect or misuse, it is not covered under the terms of this Warranty policy. Performance problems due to operator error will not be covered by the Limited Warranty policy.
5. Some minor expansion, contraction, or movement of certain parts and resulting noise, is normal and not a defect and, therefore, is not covered under this Limited Warranty.
6. Misuse includes over-firing. Over-firing can be identified later by warped plates and paint pigment being burnt off. Over-firing this appliance can cause serious damage and will nullify the Limited Warranty.
7. The Limited Warranty will cover glass thermal breakage only and will not cover misuse of the stove glass, including but not limited to:
 - a) Glass that is struck, has surface contaminates or has had harsh or abrasive cleaners used on it.
 - b) If the door is slammed or is closed while wood in the firebox is protruding out the stove opening thus striking the glass.
8. This warranty does not cover products made or provided by other manufacturers and used in conjunction with the operation of this stove without prior authorization from Blaze King. The use of such products may nullify the Limited Warranty on this stove. If unsure as to the extent of this Limited Warranty, contact your authorized Blaze King dealer before installation.
9. Blaze King will not be responsible for inadequate performance caused by environmental conditions.
10. The Limited Warranty does not cover installation and operational related problems such as use of downdrafts or spillage caused by environmental conditions. Environmental conditions include but are not limited to nearby trees, buildings, roof tops, wind, hills, mountains, inadequate venting or ventilation, excessive offsets, negative air pressures or other influences caused by mechanical systems such as furnaces, fans, clothes dryers etc.
11. The Limited Warranty does not cover damage caused by burning salt-saturated wood, corrosive driftwood, chemically treated wood or any fuel not recommended in the Owner's Manual (use cord wood only).

The Limited Warranty is void if:

 - a) The stove has been operated in atmospheres contaminated by chlorine, fluorine or other damaging chemicals.
 - b) The stove is subject to submersion in water or prolonged periods of dampness or condensation.
 - c) Any damage to the unit, combustion chamber or other components due to water, or weather damage which is the result of, but not limited to, improper chimney/venting installation.
 - d) Salt air in coastal areas or high humidity can be corrosive to the finish; these environmental conditions can cause rusting. Damage caused by salt air or high humidity is not covered by the Limited Warranty.
12. Exclusions to the Limited Warranty include: injury, loss of use, damage, failure to function due to accident, negligence, misuse, improper installation, alteration or adjustment of the manufacturer's settings of components, lack of proper and regular maintenance, alteration, or act of God.
13. The Limited Warranty does not cover damage caused to the stove while in transit. If this occurs, do not operate the stove and contact your courier and/or dealer.
14. The Limited Warranty does not extend to or include paint, door or glass gaskets or firebricks damage caused by normal wear and tear, such as paint discoloration or chipping, worn or torn gaskets, chipped or cracked firebrick, etc.
15. The Limited Warranty does not include damage to the unit caused by abuse, improper installation, or modification of the unit.
16. Damage to plated surfaces caused by fingerprints, scratches, melted items, or other external scores and residues left on the plated surfaces from the use of abrasive cleaners or polishes is not covered in this warranty.
17. Blaze King is free of liability for any damages caused by the stove, as well as inconvenience expenses and materials. The Limited Warranty does not cover incidental or consequential damages.
18. The Limited Warranty does not cover any loss or damage incurred by the use or removal of any component or apparatus to or from the Blaze King stove without the express written permission of Blaze King and bearing a Blaze King label of approval.
19. Any statement or representation of Blaze King Products and their performance contained in Blaze King advertising, packaging literature, or printed material is not part of the Limited Warranty.
20. The Limited Warranty is automatically voided if the stove's serial number has been removed or altered in any way. If the stove is used for commercial purposes, it is excluded from the Limited Warranty.

21. No dealer, distributor, or similar person has the authority to represent or warrant Blaze King Products beyond the terms contained within the Limited Warranty. Blaze King assumes no liability for such warranties or representations.
22. Blaze King will not cover the cost of the removal or re-installation of the stove, hearth, facing, mantels, venting or other components.
23. Labor to replace or repair items under this Limited Warranty will be covered per our warranty service fee reimbursement and labor rates are set per component schedule. Labor rates vary from location to location and as such total labor costs may not be covered. Please consult with your dealer or service technician for any additional charges such as travel time or additional labor charges that may apply.
24. For parts of the Blaze King woodstove or fireplace insert warranted beyond the first year, the five year limited warranty will have the same obligations as described in this document, provided, however that the purchaser shall pay the following percentage of the then current retail cost of the repair or the replacement, according to the year after purchase in the which the defect is brought to the attention of Blaze King. * * * During the 2nd year----purchaser pays 20%.
3rd year ----purchaser pays 40%. 4th year -----purchaser pays 60%. 5th year---- purchaser pays 80%.
25. If a defect or problem is determined by Blaze King to be non warrantable, Blaze King is not liable for travel costs for service work. In the event of in-home repair work, the customer will pay any in-home travel fees or service charges required by the Authorized Dealer.
26. At no time will Blaze King be liable for any consequential damages which exceed the purchase price of the unit. Blaze King has no obligation to enhance or modify any stove once manufactured (example: as a stove model evolves, field modifications or upgrades will not be performed).
27. This Limited Warranty is applicable only to the original purchaser and it is non-transferable.
28. This warranty only covers Blaze King Products that are purchased through an authorized Blaze King dealer.
29. If for any reason any section of the Limited Warranty is declared invalid, the balance of the warranty remains in effect and all other clauses shall remain in effect.
30. The Limited Warranty is the only warranty supplied by Blaze King, the manufacturer of the stove. All other warranties, whether express or implied, are hereby expressly disclaimed and the purchaser's recourse is expressly limited to the Limited Warranty.
31. Blaze King and its employees or representatives will not assume any liability for damages, either directly or indirectly, caused by improper usage, operation, installation, servicing or maintenance of this stove.
32. Blaze King reserves the right to make changes without notice. Please complete and mail the warranty registration card and have the installer fill in the installation data sheet in the back of the manual for warranty and future reference.
33. Blaze King is responsible for stocking parts for a maximum of seven (7) years after discontinuing the manufacture or incorporation of the item into its products. An exception to this would be if an OEM supplier is not able to supply a part.

SPECIFICATIONS

| | |
|----------------------------|--|
| Model | MP80 |
| Rating | 80,000 Btu. Nominal |
| Height | 35 |
| Width | 21 |
| Length | 37 |
| Flue collar | 6" ID |
| Flue pipe center to bottom | 26 1/2" |
| Recommended flue pressure | .03" water column (draft) |
| Hot air plenum opening | 30 5/8" L x 18" W |
| Fire door opening | 12" x 13" |
| Firebox length | 26" |
| Width | 14" |
| Height | 19" |
| Capacity | 4 cu. ft. |
| Fuel length | 24" |
| Firebox design features | 1) distributed draft system with preheated primary air, via cast liner ports. 2) Stainless steel baffle system to retain high combustion efficiency |
| Construction | 14 Ga. Firebox Cast iron liners 12 Ga. heat exchanger 20 Ga. cabinet Stainless steel baffle |
| Weight | 325 lbs. |

SAFETY PRECAUTIONS

- Comply with all local codes and regulations.
- Never operate a furnace that has been improperly installed.
- **DO NOT USE CHEMICALS OR FLUIDS TO START OR FRESHEN A FIRE.** Keep all flammable fluids well away from the furnace.
- **DO NOT BURN GARBAGE, GASOLINE, NAPHTHA, OR ENGINE OIL, OR RAGS SOAKED IN THESE FLUIDS.**
- Combustible material including firewood must be stored well away from the furnace, outside of the distances specified for "clearance to combustibles".
- Never operate the furnace unless you are sure the smoke pipe and chimney are in safe condition. Flue gasses may contain carbon monoxide, which is poisonous.
- Keep smoke pipe and chimney clean to prevent a chimney fire. In the event of a chimney fire turn down all thermostats and close off combustion air. Call a fire department if necessary. Have a clearly understood plan to handle a chimney fire.

Congratulations on your choice of a wood furnace from Valley Comfort. We thank you for the confidence you have placed in us.

A word about Valley Comfort -- In 1953 when most folks were excited about getting rid of their wood burning appliances, a determined entrepreneur, Pete Stoopnikoff, was convinced that he could make a better wood heater. After many years of packing "too much wood", he was determined to produce a more efficient Canadian heater. He succeeded! That's over 40 years ago and since then Valley Comfort has researched, designed, produced and marketed an expanding line of fine products. In the late 1970's safety standards were introduced to the industry and our products were some of the first to be approved. Today, all of our heaters and furnaces are tested and approved to the national standards. We have built our reputation on quality and are committed to that end when making all of our products.

This instruction booklet provides you with important instructions assuring maximum usage and service life of your furnace. Please read this booklet thoroughly and save it for future reference. Carefully follow instructions for installation.

OPERATING INSTRUCTIONS

LIGHTING THE FIRE

NEVER START A FIRE UNLESS THE FURNACE IS CORRECTLY INSTALLED. CHECK THE INSTALLATION INSTRUCTIONS CAREFULLY

In a new furnace, spread 1" of sand or ashes in the bottom of the firebox to protect against high heat and to prevent warping

Your MP80 firebox is lined with quality cast liners. Stresses inherent in the cast process must be neutralized before you build extremely hot fires. The first fire should be small and should burn no longer than 30 minutes, gradually increasing for the next six lightings.

Turn up the thermostat to open the draft

NEVER USE FLAMMABLE FLUIDS TO START THE FIRE

On top of crumpled paper place split dry kindling and then small wood. When a small fire is established add larger pieces of wood

Load the wood only to the bottom of the door.

The first time you light your furnace, high temperature paints will give off an odor. Open a window to ensure adequate ventilation.

The damper will close when either the plenum temperature reaches the limit level or the room temperature reaches the thermostat setting.

The circulation blower should cycle off and on automatically, dependent on plenum temperature.

WHAT KIND OF WOOD

There is an old idea that you should use some green wood to insure long burn times. **THIS IS WRONG!** Always remember, the dryer the wood the better. It takes a great deal of energy to evaporate the moisture contained in green wood and that energy will not be heating your house. Green or wet wood also increases creosote formation.

In most cases the harder the wood the more heat it produces,. In all cases the dryer the wood the more heat it produces. We recommend at least 12 months drying time for split piled wood, protected from rain.

Your wood burning furnace is not designed to burn coal and doing so is unsafe. Burning coal voids the warranty. Never burn salt water drift wood. It is very corrosive and will damage the firebox. Burning salty wood also voids the warranty.

This controlled combustion firebox has been designed for high efficiency and long burn times. The proper time to add more wood is when the last charge has been reduced to a glowing charcoal bed stage. There will be very little smoke at this stage in the burn cycle.

WARNING: BURNING WET UNSEASONED WOOD CAN CAUSE EXCESSIVE CREOSOTE ACCUMULATION. WHEN CREOSOTE IS IGNITED IT CAN CAUSE A CHIMNEY FIRE WHICH MAY RESULT IN A SERIOUS HOUSE FIRE

OPERATIONS

Draft is created by the heated air rising in the chimney system. This draft will pull fresh combustion air into the firebox. Recommended draft is .03 in. w.c. Too little draft results in a sluggish fire and smoke backing up into the house when the furnace door is opened. Too much draft (over .06 in. w.c.) is unsafe and wastes fuel. (Use a Barometric damper when necessary)

The damper opening has been set at the factory and should not be adjusted.

Ashes should be cleaned out when they reach a depth of 4" in the firebox. Leave approximately 1" of ashes in the bottom of the firebox. Dispose of ashes in an airtight, metal container and store it outside away from combustibles.

Adjust the bleed air screw on the damper door to just maintain combustion air during times when the damper door is closed .

OPEN THE FIRING DOOR ONLY TO RELOAD FUEL.

Your appliance must be vented by a chimney system suitable for solid fuel fired appliances and should be checked periodically to insure its safe condition.

During a power failure, use extreme caution to not over fire. Leave the damper closed. Remove the blower cabinet door and air filter. Open all registers to allow maximum air flow in the duct system. Although there is considerable heat available even during a power failure, this furnace is not approved for gravity operations. Without the blower running, high temperature in the system builds up quickly and over firing will result in permanent damage to the firebox. Maintain a small fire only. Over firing voids all product warranties.

If your furnace is operating as an add-on combination unit remember both units will not fully fire at the same time. If wood is to be your main source, set the wood thermostat at your desired room temperature and set the backup thermostat approximately 5 degrees lower.

CREOSOTE

In any wood burning appliance, creosote can be a problem. The best way to handle it is to prevent or minimize it by proper firing methods. If creosote does occur you should understand its nature and have a plan to handle it. Always assure safety by having a clearly understood plan of how to handle a chimney fire, if it ever occurs.

Creosote is a black, ill smelling liquid which results from distillation of wood gases during the combustion process. It solidifies depending on temperature and is highly combustible in either state . The amount of creosote depends on several factors:

- 1) Moisture content of the fuel
- 2) Stack or flue temperature
- 3) Amount of draft
- 4) Appliance Efficiency

When stack temperatures drop below 120oC (250oF), creosote will condense out of the products of combustion or smoke. Once a flue pipe becomes heavily coated with creosote, the only safe way to remove it is with a proper chimney cleaner or brush. A combination of wet fuel and poor operating procedure may necessitate weekly cleaning to remove creosote buildup.

Remember - the hotter the fire the less creosote. A large smoldering fire causes more creosote than a small, high heat fire. We recommend that each day, preferably in the morning, a small intense fire be maintained. This daily practice should burn out the small deposits of creosote before they build to a dangerous level. Morning and evening the draft should be opened for at least 20 minutes by turning the thermostat up. NEVER "burn out" large deposits of more than one day's accumulation.

In conclusion, creosote can best be controlled as follows:

- Burn dry split wood.
- Mixing small and large pieces of wood.
- Using smaller split wood during warmer weather.
- Keeping stack temperature up by using double wall pipe on flue runs and protecting outside chimney installations in a chase.
- Minimizing elbow use and keeping flue runs as short as possible ensuring tight connections.
- Checking daily for creosote until experience shows how often cleaning is required. Remember a clean chimney is a safe chimney.
- Having a clearly understood plan should a chimney fire occur.

WARNING: FAILURE TO INSPECT AND CLEAN YOUR CHIMNEY SYSTEM REGULARLY CAN RESULT IN A SERIOUS FIRE WHICH MAY DAMAGE YOUR CHIMNEY OR CAUSE A HOUSE FIRE

MAINTENANCE

Maintain fire door gaskets to ensure a tight seal. Use 7/8" replacement gasket. Glue is not necessary as high density gasket will fit tight and stay secure.

WARNING: DO NOT OPERATE THIS WOOD FURNACE IF THE DOOR GASKET IS MISSING OR DAMAGED. DANGEROUS OVERFIRING CAN OCCUR WHICH CAN DAMAGE THE APPLIANCE OR IGNITE CREOSOTE IN THE CHIMNEY, POSSIBLY CAUSING A HOUSE FIRE. IF ANY PART OF THE WOODSTOVE OR FLUE SYSTEM IS GLOWING THE FURNACE IS BEING OVERFIRED.

OPERATE THE ALTERNATE ELECTRIC, GAS OR OIL FURNACE PERIODICALLY TO ENSURE THAT IT WILL OPERATE SATISFACTORILY WHEN NEEDED.

INSPECT VENT PIPES, VENT PIPE JOINTS AND VENT PIPE SEALS REGULARLY TO ENSURE THAT SMOKE AND FLUE GASES ARE NOT DRAWN INTO OR CIRCULATED BY, THE AIR CIRCULATION SYSTEM

Your appliance has been manufactured in the Valley Comfort tradition of high quality. To ensure years of trouble free operation, have your furnace serviced regularly by your Valley Comfort dealer.

After each heating season thoroughly clean the chimney and firebox so your system is ready for next fall. Inspect all parts for signs of abnormal wear or problems.

INSTALLATION INSTRUCTIONS

GENERAL

Please take time to read these instructions thoroughly. You have invested your money in a quality product. Too much haste now, could result in a faulty installation, and cause serious problems. In addition to these general installation instructions, which apply to all installations, you must follow the specific instructions which pertain to your particular installation i.e.: add-on to electric, gas, oil or independent installations.

FREIGHT DAMAGE

This product was carefully inspected before it left Valley Comfort, inspect the unit thoroughly and report any damage to the carrier and then immediately file a freight damage claim. Your local Valley Comfort dealer will assist if required.

PARTS INCLUDED WITH MP80 (parts inside firebox for shipping)

Furnace

Fan limit controls, bracket and electrical junction box

White-Rodgers 5D51-78 set at 150° or equivalent

White-Rodgers 5D51-78 set at 220° or equivalent

White-Rodgers 5D51-78 set at 250° or equivalent

Thermostat (White Rodgers 1E78 or equivalent)

Poker

Ash shovel

Instruction book

Insulation hold back strips

OPTIONAL EQUIPMENT

- 900 cfm. to 1200 cfm.. Variable Blower and cabinet for independent use.
- CF6 kit for use in wood counter flow installations

INSTALLATION OPTIONS

The MP80 may be installed as follows: (Typical Mechanical Drawings on page 15 fig. #1.)

1) An add-on to any of the following furnaces:

a) An electric forced air furnace rated at 10 KW to 25 KW with a minimum size fan of 900 cfm. Diagram 8A on page 23(electrical drawing)

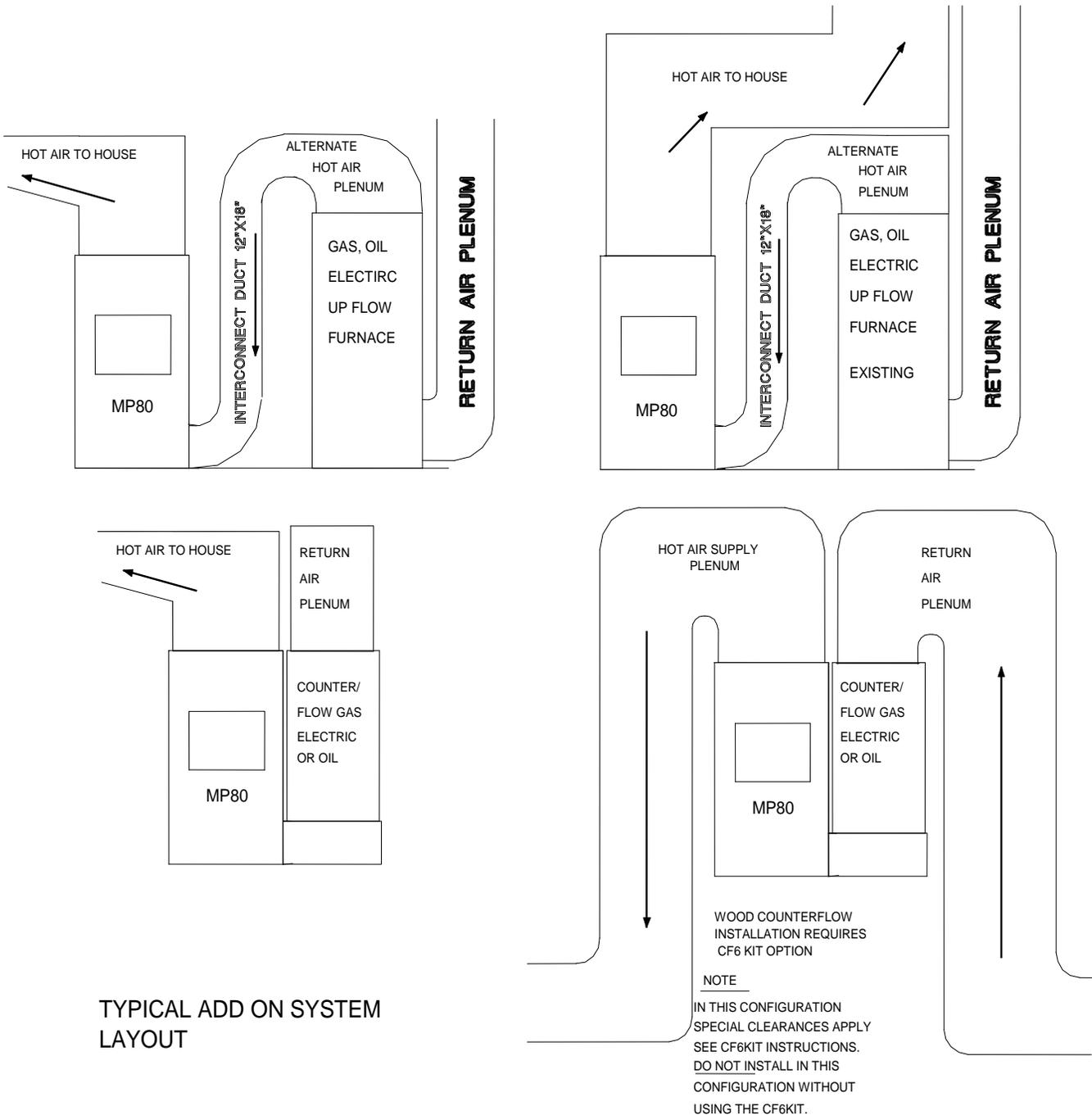
b) A forced air gas furnace with a maximum output of 120,000 Btu. and a minimum size fan of 900 cfm.

Diagram 6 on pg 22 (electrical drawing)

c) An oil furnace having an oil input as shown on the nameplate of not more than 1.2 usgph. and a fan capacity of not less than 900 cfm. Diagram 6 on page 22 (electrical drawing)

2) As an independent forced air wood furnace equipped with a blower of not less than 900 cfm. capacity. Diagram 7 on page 24 (electrical drawing)

Typical installation illustration Fig 1.



(80FIG1)

***** SEE PAGE 25 FOR STAND-ALONE BLOWER DIMENSIONS *****

CAUTIONS

All installations must comply with local building safety codes.

Installation shall be by a licensed, qualified mechanical installer experienced in heating equipment installations.

THE WOOD SECTION MUST BE VENTED INTO A CHIMNEY APPROVED FOR SOLID FUEL USE BE IN GOOD CONDITION. MOST GAS FURNACES ARE VENTED INTO "B" VENT PIPE. THIS IS UNACCEPTABLE FOR SOLID FUEL APPLIANCES. THE MP80 MUST NOT BE VENTED INTO A CHIMNEY WHICH ALSO SERVES AS A GAS APPLIANCE VENT. DO NOT CONNECT THE DUCT WORK SO REVERSE OR PARALLEL FLOW IS POSSIBLE. DO NOT RELOCATE ANY OF THE CONTROLS ON THE ORIGINAL OR ALTERNATE FURNACE.

Ensure that all existing or alternate furnace systems are in good operating condition before installing the add-on.

Valley comfort Systems Inc. supports the Wood Energy Technology Transfer Inc. This organization provides training and certification for personnel involved in installation and maintenance of wood heating systems across Canada. For your safety and satisfaction your system must be properly installed.

MINIMUM CLEARANCES TO COMBUSTIBLES (See label copy addendum)

| | |
|---|-----------|
| Wood charging end | 48 inches |
| One side | 6 inches |
| Other side for servicing | 18 inches |
| Single wall flue to combustibles including electric wiring and electric furnace | 18 inches |
| Plenum and first 6 ft. of supply duct | 2 inches |

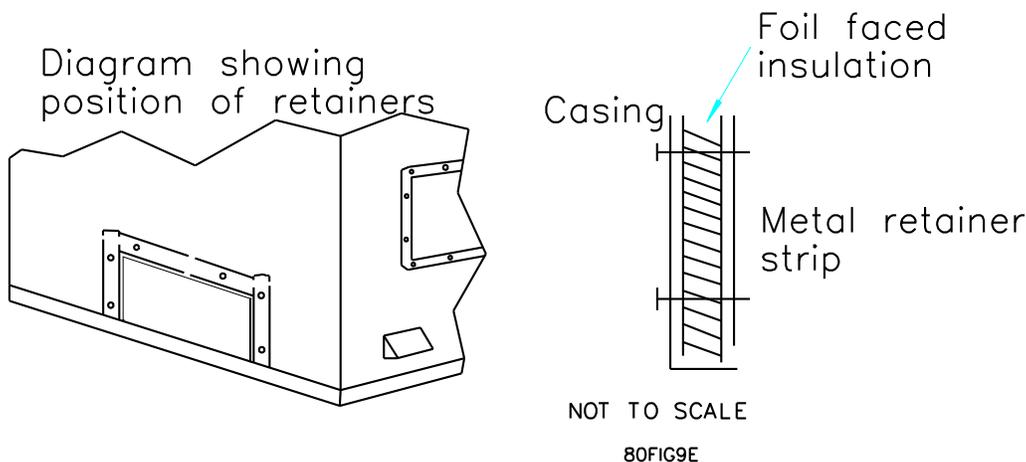
If the furnace sits on a combustible floor, a non combustible shield must be used underneath and extend 6 in. out from all sides and 18 in. out from the charging end. This floor protection is required to prevent sparks from falling onto the combustible floor,(see CSA B365-M87) it is not required to be a heat protective covering.

This furnace must be installed in compliance with all local codes and regulations.

LOCATION RE ALTERNATE FURNACE OR BLOWER

The MP80 can be located on either side of the alternate furnace as space permits, in a series downstream configuration. Minimum size of the interconnect duct is 12 in. x 18 in. **DO NOT USE INTERCONNECT DUCT ELBOWS THAT HAVE AN INSIDE RADIUS OF LESS THAN 6" (150mm.).**

NOTE: After interconnect duct opening has been cut into the side of the MP80, **insulation must be fastened back to the furnace cabinet all around the opening.** Use the metal strips provided to hold the insulation tightly against the cabinet inside, to prevent the insulation from dislodging due to blower induced vibration.



PRESSURE LOSS

Before any changes are made to the existing furnace system you must establish the working parameters of that system. You can then insure that the addition of the add-on will not degrade the operation of the original system and can confirm correct air flow will be maintained. Change all filters in the system to insure maximum free air flow. Using an accurate manometer, check the static pressure at the end of a typical duct near the exit to the house and then check the static pressure in the plenum above the existing furnace.

Pressure drop = Static pressure at furnace -(minus) static pressure at duct exit

Record the pressure drop of the original system.

Addition of the add-on furnace will add air flow resistance in the system. After installation is complete measure the pressure drop in the same run measured before add-on installation. If the air flow has diminished the blower speed should be adjusted to compensate. When using a belted blower the pulley size should be changed or adjusted to speed up the blower. If the pulley size is adjusted measure the blower motor current to insure that it is still within the nameplate rating. It may be necessary to replace the motor with a more powerful motor. If a direct drive blower is used change to a higher speed. Do not change the blower size.

COMBUSTION AIR

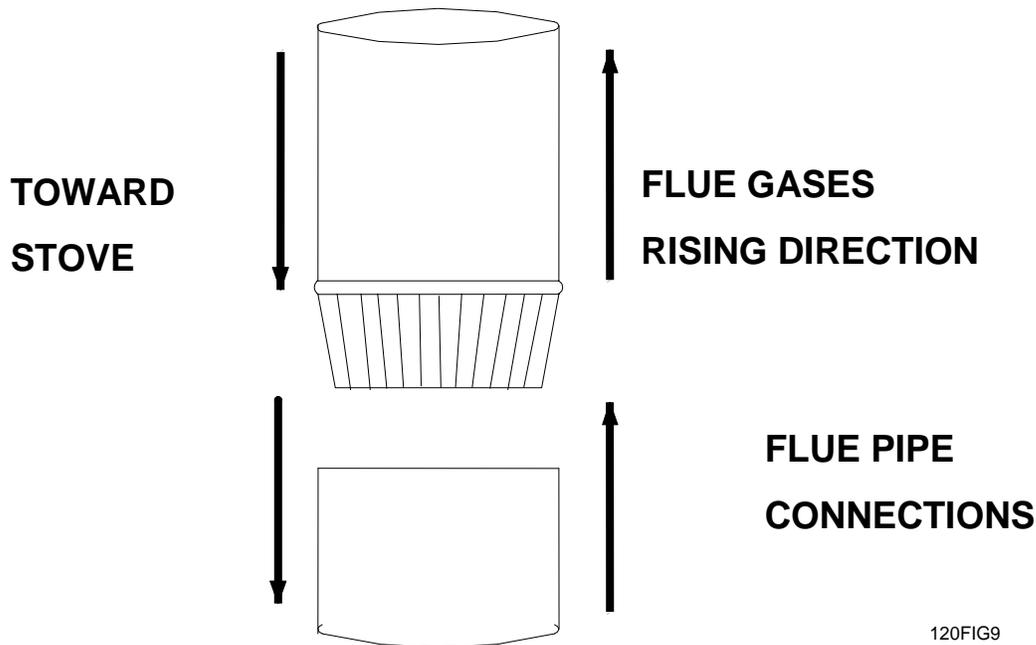
Insure adequate combustion air allowing for all other exhausting type appliances in the dwelling (range hoods, dryers, fireplaces etc....). Introduce outside air if required to the furnace and allow for circulation via two openings. In confined area, provide at least 1 sq. inch minimum free area for each 1000 BTU installed capacity.

LOCATION RE FLUE

The Chimney must be an approved chimney for use with solid fuel fired appliances, be in good repair and be free from leaks and obstructions. If using a masonry chimney, it must meet the minimum standards of the building code of Canada. The wood flue must always enter the chimney below an oil flue. You must comply with the local authority having jurisdiction and with CSA installation standard B365-M87. **DO NOT OPERATE THE MP80 WITH A DRAFT OF OVER .06 INCHES WATER COLUMN. HIGHER DRAFT LEVELS MAY CAUSE THE FIRE TO BURN OUT OF CONTROL AND CREATE A FIRE HAZARD.**

Flue pipe between the furnace and the chimney should be as short and direct as possible, rising a minimum of 1/4" per running foot. The chimney connector must be attached to either an approved masonry chimney or one of the listed factory built chimneys suitable for use with solid wood fuel. All joints must be tight and fastened with sheet metal screws. Place the small (crimped) end of the pipe into the furnace collar and into each preceding length of pipe to ensure that any creosote which might form will run back down into the furnace see fig 10 below.

WARNING: Chimney connector is to be used only within the room, between the stove and ceiling/wall. Never use chimney connector to pass through a combustible ceiling or wall. Always maintain the minimum clearances to combustibles as required by the building applicable codes.

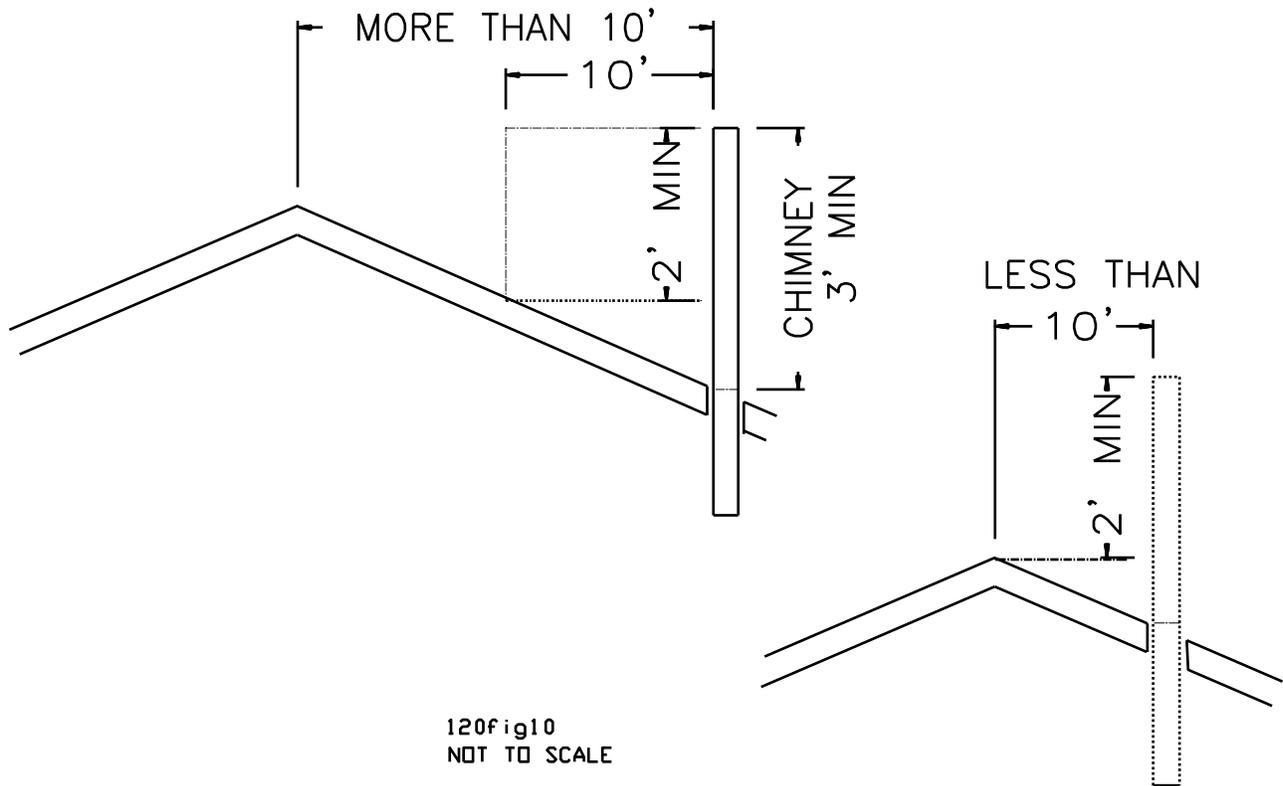


120FIG9

Recommended draft is .03 in. water COLUMN. It is unsafe to operate the furnace with more than .06 in. water column draft, use a barometric control, if necessary, to achieve this.

CHIMNEY HEIGHT REQUIREMENTS

Regardless of whether you use a masonry chimney or a listed metal chimney it must be the required height above the roof or other obstructions. The code requires the chimney to be at least 3 feet higher than the highest point where it is passed through the roof and at least 2 feet higher than the highest part of the roof or structure that is within 10 feet of the chimney, measured horizontally. (see diagram below)



The height requirement is necessary in the interest of safety and does not necessarily assure proper flue draft. Use a minimum total system height of 12 feet, measured from the stove flue collar to the top of the chimney, not including the chimney cap.

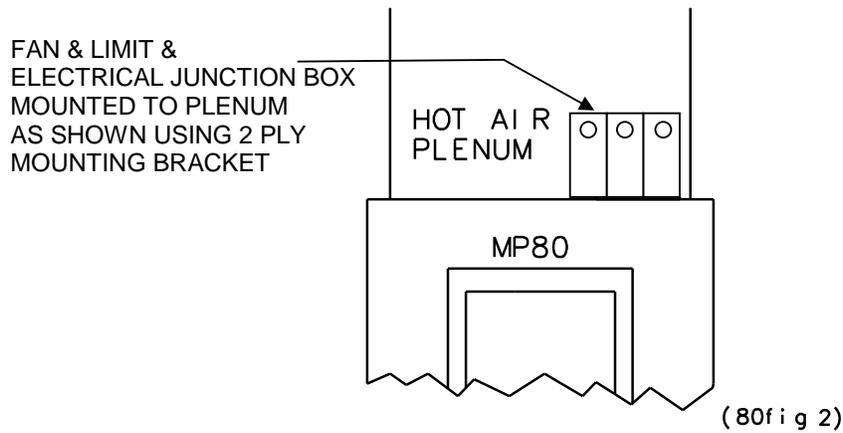
THERMOSTATS

Stand alone wood furnace installations use one thermostat for the wood furnace. Combination systems using your wood furnace in conjunction with an alternate furnace (gas/oil/electric) will use 2 thermostats, one to control the wood furnace and one to control the alternate furnace. The two thermostats are interconnected via the various limit controls, to prevent simultaneous operation of both furnaces when the hot air plenum reaches 150°F. Thermostats should be mounted side by side on an inside wall out of direct sunlight or other heat sources.

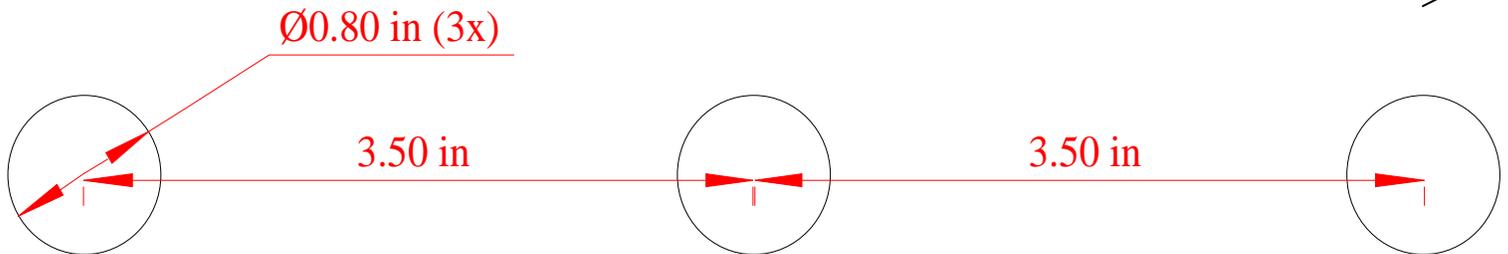
FAN LIMIT INSTALLATION

Using the bracket provided, install the fan limit and junction box assembly onto the warm air plenum, above and to the right of the firebox fuel door, as illustrated in Fig 2. All 120vac wiring must be routed on the outside of the cabinet surface. Installation of wiring must be by a qualified electrician. See specific add on type instructions for wiring diagrams that apply. Wire between the junction box and the damper motor should be routed in the outside channel of the bracket, to the right of the firebox door with clips at each end as required. Clips must not compress leads tightly against the surface.

FIG 2

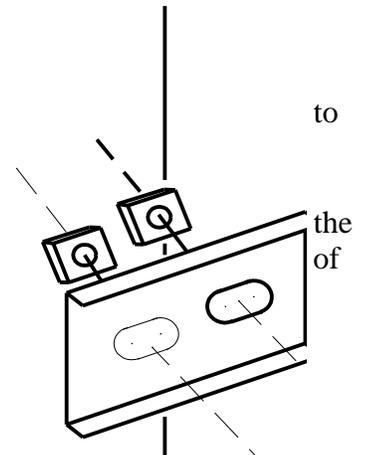


TEMPLATE FOR DRILLING HOLES—CUTOUT LINES



DOOR AND LATCH INSTALLATION

Install the firebox door on the frame hinges. Install the door latch catch on the frame mounting bracket, as shown below, using the two 1/4" x 3/4" carriage bolts provided. Adjust the door latch catch for a snug fit of the door against the gasket. The door gasket will "seat" after a short time so initial adjustment should be snug. Advise the homeowner to check the fit the door gasket from time to time to ensure a seal all around the firebox door. A loose fitting door will allow entry of excess air and result in higher burn rates with less control.



ADD-ON TO OIL FURNACE

The MP80 may be connected to an oil furnace having a rated input of up to 1.2 USGPH. Minimum blower capacity must be at least 900 cfm.. A regular upflow oil furnace may be used and connected as per fig. 1 on page 15. The MP80 can be located on either side of the oil furnace. Minimum interconnect duct size is 12" X 18" with minimum 6" inside radius elbows. The wood furnace requires a chimney approved for solid fuel use. Maintain clearances to all combustibles. Refer to general instructions portions of this manual also. If changes are made to the installation of the oil furnace these shall comply with CSA Standard B139.

An interconnect limit switch system must be included in the control circuitry to prevent the simultaneous operation of both furnaces when the hot air plenum reaches the preset level of 150°F. See Typical wiring Diagram 6 on pg. 22.

ADD-ON TO GAS FURNACE

The MP80 may be connected to a gas furnace having a rated input up to 120,000 BTU. Minimum blower capacity must be at least 900 cfm.. A counterflow gas furnace may be used with an interconnect duct as indicated in Fig 1. page 15. A regular upflow gas furnace may also be used and connected as per Fig 1 on pg. 22. The MP80 can be located on either side of the gas furnace. Minimum interconnect duct size is 12" x 18" with minimum 6" inside radius elbows. The wood furnace requires a chimney approved for solid fuel use. Maintain clearances to all combustibles. Refer to general instructions portions of this manual also.

THE OPERATION OF THE GAS FURNACE MUST BE VERIFIED, FOR ACCEPTABLE OPERATION BEFORE AND AFTER INSTALLATION OF THE ADD ON, BY A GAS FITTER WHO IS RECOGNIZED BY THE REGULATORY AUTHORITY. DO NOT CONNECT TO ANY FURNACE THAT HAS NOT BEEN CERTIFIED INITIALLY AS COMPLYING WITH CGA STANDARD CAN1-2.3 OR ITS PRECEDENTS. DO NOT CONNECT TO ANY FURNACE THAT IS NOT EQUIPPED WITH AN AIR CIRCULATION BLOWER.

DO NOT, UNDER ANY CIRCUMSTANCES, CONNECT THE MP80 TO A CHIMNEY WHICH ALSO VENTS A GAS FURNACE OR OTHER GAS APPLIANCE.

ADD-ON TO ELECTRIC FURNACE

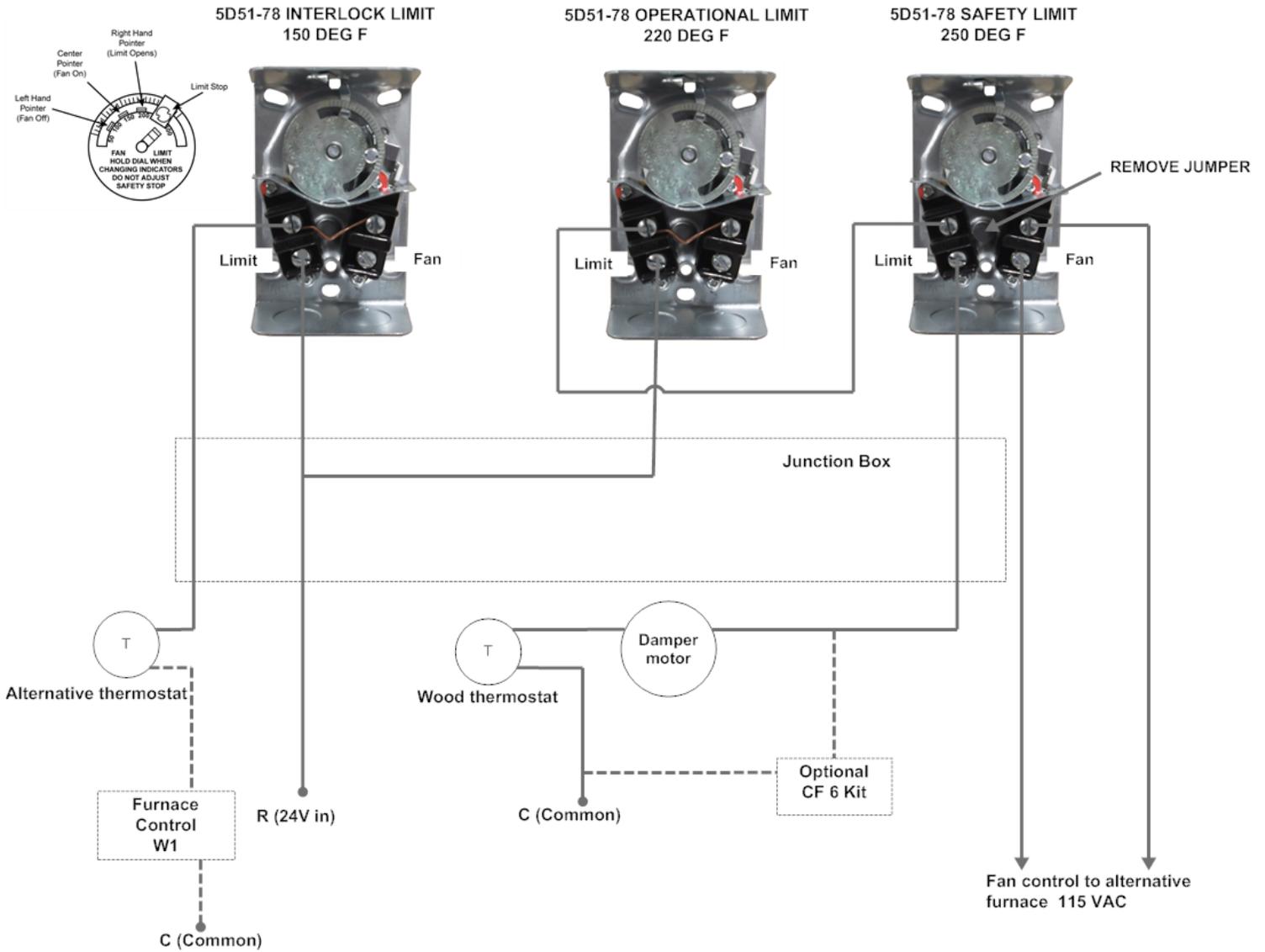
The MP80 may be added to an electric furnace with heating capacity between 10KW and 25 KW. Minimum blower capacity must be at least 900 cfm. Electric furnaces approved for installation in any position can be inverted and used in a down flow position using an adapter duct between the furnace and the add-on as indicated in fig. 1 pg. 13. The electric furnace can be located on either side of the MP80 but clearances to combustibles must be maintained. Refer to general and pressure loss instruction portions of this manual. (pg. 15)

If changes are made to the installation of the electric furnace they must comply with CSA Standard C22.1.

An interconnect limit switch system must be included in the control circuitry that prevents the simultaneous operation of both furnaces when the hot air plenum reaches the preset level of 150°F. Typical wiring diagram follows below re: Diagram 8A (with W1,R,C and G connections.) and 6 for basic units.

An interconnect limit switch system must be included in the control circuitry to prevent the simultaneous operation of both furnaces when the hot air plenum reaches the preset level of 150°F. Typical wiring diagram follows, see Diagram 6 on pg. 20

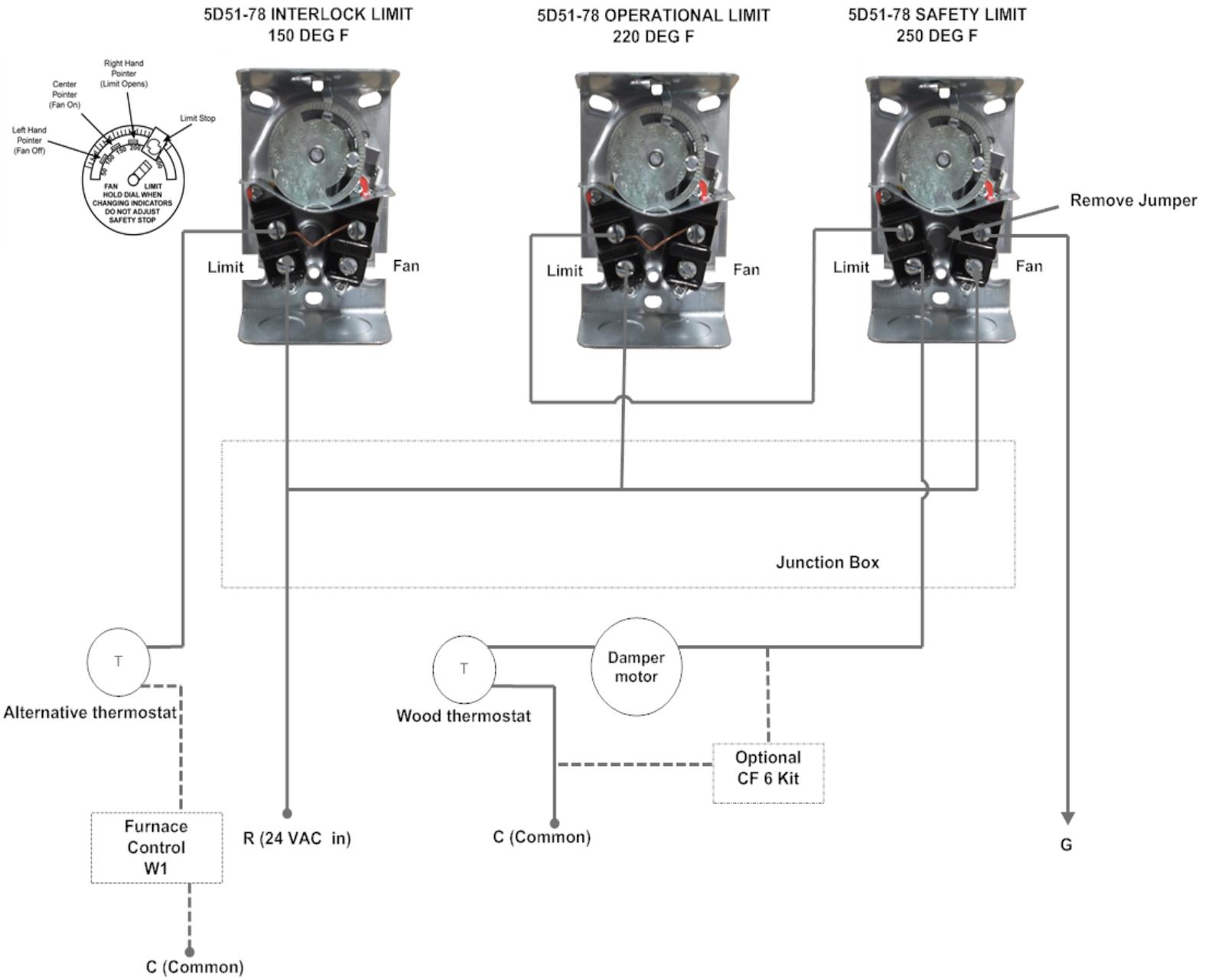
**DIAGRAM 6 TYPICAL WIRING FOR WOOD / GAS, WOOD / OIL OR WOOD/
ELECTRIC COMBINATIONS**



INDEPENDENT WOOD FURNACE

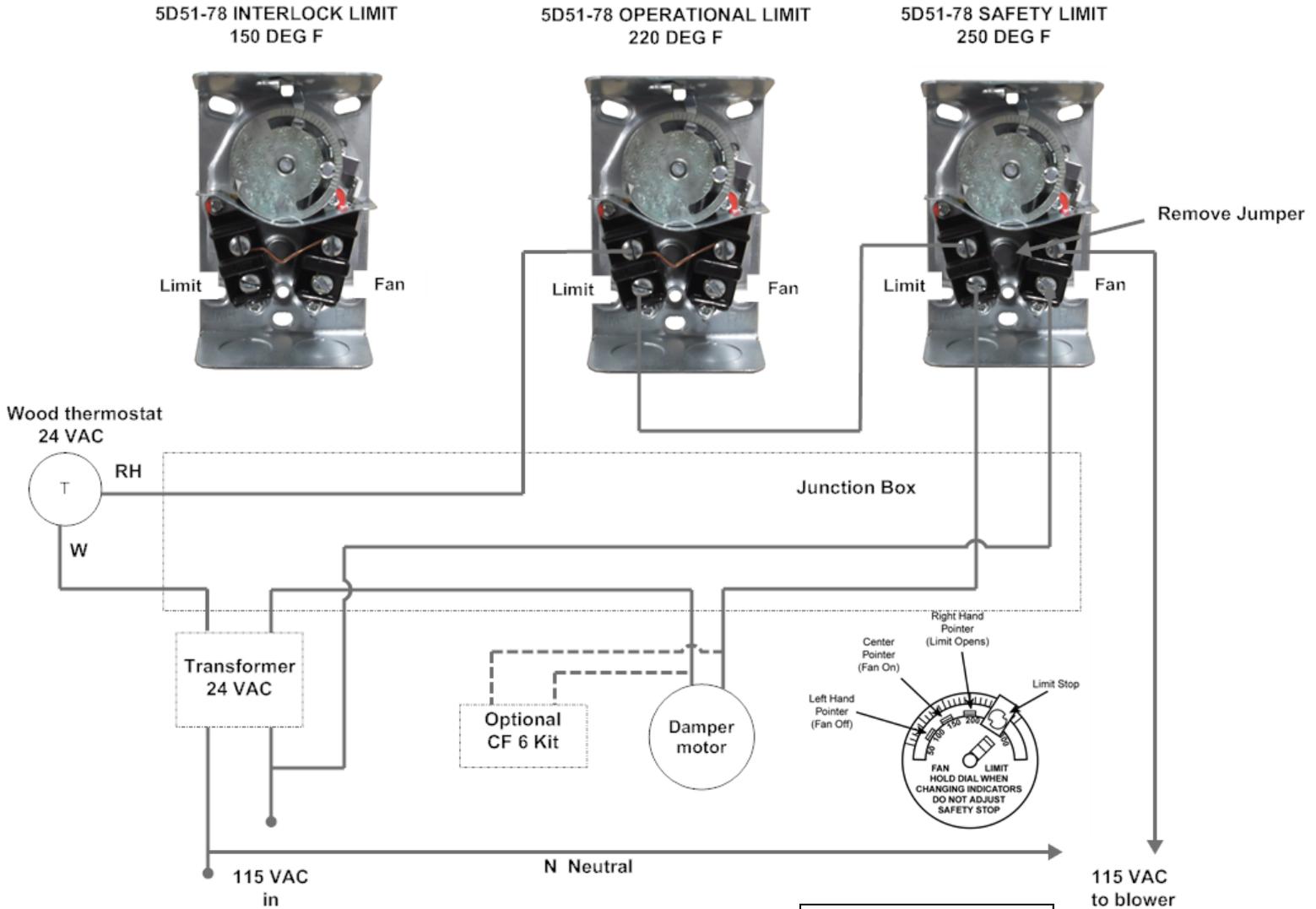
When installed with a blower cabinet mounted on either side the MP80 becomes an INDEPENDENT wood only furnace. The blower must have a minimum 900 cfm. capacity. In this configuration the interlock function of the transfer relay is not used. See Electrical Diagram 7 on page 24.

DIAGRAM 8A WIRING CONNECTIONS WHEN USING ELECTRICAL FURNACE WITH W1,R,C&G CONNECTIONS.



You must connect the alternate furnace thermostat through the interlock limit switch to provide interlock lockout of the alternate furnace when the wood plenum rises above 150 degrees.

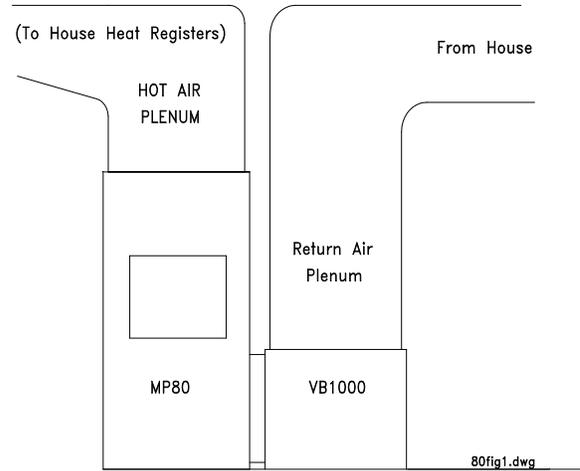
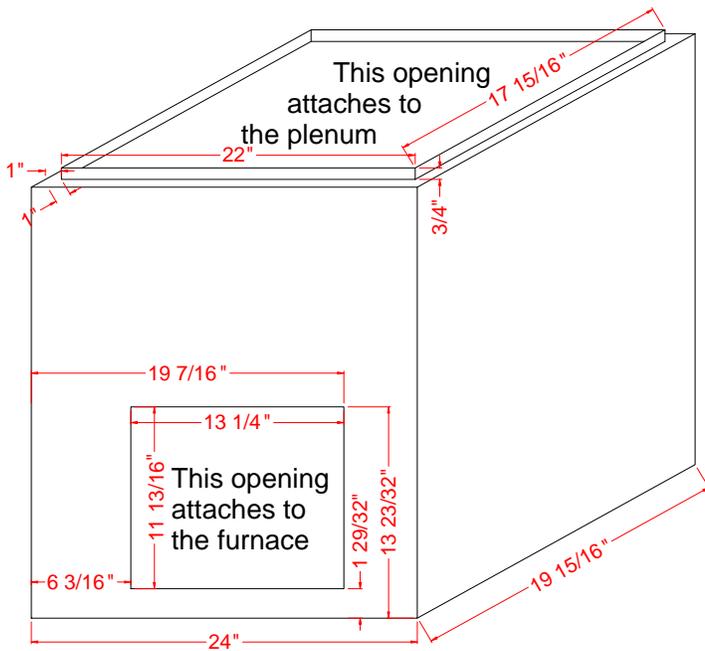
**DIAGRAM 7 WIRING AS AN INDEPENDENT FORCED AIR WOOD FURNACE
EQUIPPED
WITH A VB1000 BLOWER**



24 Volt Transformer is included with the VB1000 Blower

When installing in a stand-alone configuration with a VB1000 blower. Only 2 out of the three limit switches are used. The middle limit is the Operating Limit and the right limit switch is the Safety Limit. The left limit is only for use with an alternate furnace.

VB1000 Valley Comfort Blower Specifications



- 1/3 HP 110V Motor
- Adjustable from 900cfm to 1200 cfm
- 20Ga Steel Cabinet Construction
- High Quality Baked Enamel Finish
- Color matched to Valley Comfort Wood Furnaces
- Complete with 24" X 20" Air Filter

Please check the dimensions on this drawing against the unit you are installing as there may be some slight variations in the dimensions due to manufacturing tolerances and or changes.

Installation instructions begin on page 14 of this manual.



TESTED TO / EPROUVE SELON: CSA B366. 1, WH PN008 REPORT / RAPPORT: #4242 (JANUARY 1984)

THIS UNIT MAY BE INSTALLED AS FOLLOWS:

- A) AS AN INDEPENDENT FORCED AIR FURNACE EQUIPPED WITH A HAC 900 CFM FAN AS SHOWN IN DIAGRAM "A" BELOW.
- B) AS A DOWN STREAM SERIES DUCT ADD-ON TO ANY OF THE FOLLOWING FURNACES:
 - 1) OIL FURNACE HAVING OIL INPUT AS SHOWN ON ORIGINAL NAMEPLATE BETWEEN .81 USGPH & 1.2 USGPH (MAX.) DIAGRAM "B".
 - 2) A GAS FIRED FORCED AIR FURNACE WITH A MAXIMUM OUTPUT OF 120,000 BTU AND A MINIMUM FAN SIZE OF 900 CFM, DIAGRAM "B".
 - 3) ELECTRIC FORCED AIR FURNACE RATED AT 10 KW TO 25 KW INPUT. MINIMUM FAN SIZE 900 CFM, DIAGRAM "B".

CHIMNEY REQUIREMENTS

ALL FUEL CHIMNEY WITH MINIMUM SIZE OF 29 SQ. IN. (1820 SQ. MM.) DO NOT CONNECT THIS FURNACE TO A CHIMNEY SERVING A GAS APPLIANCE.
ELECTRICAL REQUIREMENTS: 120 V AC 15 A CRKT. FAN CONTROL RATING 2000 VA.

MINIMUM CLEARANCE

| | | |
|--|--------|-----------|
| WOOD CHARGING END | 48 IN. | (1220 MM) |
| ONE SIDE | 6 IN. | (150 MM) |
| OTHER SIDE | 18 IN. | (460 MM) |
| FLUE (COMBUSTIBLES, ELECTRICAL WIRE AND ELECTIC FURNACE) | 18 IN. | (460 MM) |
| PLENUM & FIRST 6 FT. OF DUCT | 2 IN. | (50 MM) |
| MINIMUM INTERCONNECT DUCT SIZE FOR ADD ON USE 12 IN. (300 MM) x 18 IN. (460 MM). | | |

NOTE - NOT APPROVED FOR PARALLEL OR SPLIT PLENUM (ADD-ON SERIES ONLY APPROVED)
IF INSTALLED ON COMBUSTIBLE FLOOR THE FLOOR MUST BE PROTECTED 18 IN. (460 MM) IN FRONT OF WOOD CHARGING END.

REFER TO DETAILED INSTALLATION INSTRUCTIONS

INSTALLED BY [REDACTED]
ADDRESS [REDACTED]
DATE [REDACTED]

OPERATING INSTRUCTIONS:

- REFER TO DETAILED MANUFACTURER'S INSTRUCTIONS.
- 1) BURN WOOD ONLY.
 - 2) LOAD FUEL CAREFULLY OR DAMAGE MAY RESULT
 - 3) FILL TO BOTTOM OF DOOR ONLY.
 - 4) DO NOT ATTEMPT TO LIGHT A FIRE WHEN THERE IS OIL OR GAS VAPOUR PRESENT.
 - 5) DO NOT USE CHEMICALS OR FLUIDS TO START FIRE

CAUTIONS:

- 1) DO NOT BURN GARBAGE, NAPHTHA, GASOLINE OR ENGINE OIL UNDER ANY CIRCUMSTANCES.
- 2) KEEP FIRE DOOR TIGHTLY CLOSED.
- 3) IN THE EVENT OF A RUNAWAY FIRE OR CHIMNEY FIRE, CLOSE ALL COMBUSTION AIR. THE DAMPER CHAIN CAN BE UNHOOKED FROM THE CAM TO MANUALLY CLOSE THE DRAFT. CALL THE FIRE DEPARTMENT AND BE PREPARED TO EVACUATE THE HOUSE. CORRECT THE PROBLEM BEFORE REFIRING.
- 4) CLEAN HEAT EXCHANGER, FLUE PIPE AND CHIMNEY REGULARLY TO PREVENT A BUILDUP OF SOOT OR CREOSOTE. APPLIANCE FLUE MUST BE IN GOOD CONDITION.
- 5) STORE ALL FUEL OR COMBUSTIBLES OUTSIDE OF THE CLEARANCES LISTED AS "CLEARANCE TO COMBUSTIBLES"
- 6) **IN THE EVENT OF A POWER FAILURE KEEP FIRE LOW - CLOSE DRAFT AIR, REMOVE BLOWER CABINET DOOR AND AIR FILTERS TO ASSIST FLOW - OPEN ALL REGISTERS.**
- 7) SYSTEM SHOULD BE INSTALLED AND INSPECTED ANNUALLY BY A QUALIFIED PERSON.
- 8) DISCONNECT POWER BEFORE SERVICING.
- 9) "MAINTAIN COMUSTION AIR TO BOTH FURNACES - AIR STARVATION IS DANGEROUS".
- 10) A FRESH AIR OPENING OF AT LEAST 3.3 MM²/w (1 1/2in²/1000btu/h) SHALL BE PROVIDED.

APPROVED ELECTRICAL COMPONENTS:

| | |
|----------------|---------------------------------------|
| THERMOSTAT - | HONEYWELL - 7822A1258 OR EQUIVALENT |
| DAMPER MOTOR - | HONEYWELL - M847A1049B OR W.R. 2070-3 |
| FAN LIMIT - | HONEYWELL - L4064R1027 OR EQUIVALENT |
| FAN LIMIT - | HONEYWELL - L4064L1129 OR EQUIVALENT |
| FAN LIMIT - | HONEYWELL - L4064R1043 OR EQUIVALENT |

CETTE UNITE PEUT ETRE INSTALLEE COMME INDIQUE CI-DESSOUS:

- A) FOURNAISE INDEPENDANTE A CIRCULATION D'AIR FORCE EQUIPEE AVEC VENTILATEUR HAC 900, COMME MONTRE DANS LE DIAGRAMME "A" EN DESSOUS.
- B) FOURNAISE ANNEXE AVEC TUYAUX EN AVAL, MONTES EN SERIE, EMPLOYEE CONJOINTEMENT AVEC N'IMPORTE QUELLE DES FOURNAISES SUIVANTES:
 - 1) FOURNAISE A MAZOUT AYANT UNE CONSOMMATION DE MAZOUT TEL QU'INDIQUE SUR LA PLAQUE SIGNALETIQUE DU FABRICANT ORIGINAL, ENTRE .81 USGPH ET 1.2 USGPH (MAX) DIAGRAMME "B".
 - 2) FOURNAISE A GAZ A CIRCULATION D'AIR FORCE AVEC UNE CAPACITE MAXIMUM DE 120,000 BTU ET SOUFFLEUR DE 900 CFM MINIMUM, DIAGRAMME "B"
 - 3) FOURNAISE ELECTRIQUE A CIRCULATION D'AIR FORCE D'AIR FORCE D'USE PUISSANCE MINIMUM DE 10 KW A 25 KW, AVEC SOUFFLEUR 900 CFM MINIMUM, DIAGRAM "B".

CONDITIONS DE LA CHEMINEE REQUISES

CHEMINEE POUR TOUT MATERIAU COMBUSTIBLE 29 PO. CA. (1820 MM CA) MINIMUM. N'ATTACHER PAS CETTE FOURNAISE A UNE CHEMINEE QUI DEJA FONCTIONNE EN CONJONCTION AVEC UN APPAREIL AU GAS.

CONDITIONS ELECTRIQUES REQUISES

120 V AC 15 A CRKT. CONTROLE DU VENTILATEUR 2000 VA.

DEGAGEMENTS MINIMUMS:

| | | |
|--|--------|-----------|
| BOUT DE CHARGMENT | 48 PO. | (1220 MM) |
| D'UN COTE | 6 PO. | (150 MM) |
| DU COTE OPPOSE | 18 PO. | (460 MM) |
| TUYAU (MATERIAUX COMBUSTIBLES, FIL ELECTRIQUE ET FOURNAISE ELECTRIQUE) | 18 PO. | (460 MM) |
| BONNET ET 6 PREMIERS PIEDS DE TUYAU | 2 PO. | (50 MM) |
| DIMENSION DU RACCORDEMENT DES TUYAUX MINIMUM, 12 PO. (300MM) x 18 PO. (460 MM) | | |

NOTE - PAS APPROUVE POUR ANNEXE AVEC BONNET PARALLELE (SEULEMENT EN SERIE). SI INSTALLE SUR UN PLANCHER COMBUSTIBLE ON DOIT METTRE AU MOINS 18 PO. (460MM) D'UN MATERIAU PROTECTEUR SUR LE PLANCHER DEVANT LE BOUT DE CHARGEMENT. VOIR INSTRUCTIONS D'INSTALLATION DETAILEES

INSTALLEE PAR [REDACTED]
ADRESSE [REDACTED]
DATE [REDACTED]

INSTRUCTIONS D'OPERATION

- VOIR INSTRUCTIONS DETAILEES DU FABRICANT.
- 1) BRULER DU BOIS SEULEMENT.
 - 2) CHARGER LE BOIS AVEC PRUDENCE AFIN D'EVITER LE DOMMAGE.
 - 3) NE PAS CHARGER LE BOIS PLUS HAUT QUE LE BAS DE LA PORTE DE CHARGEMENT.
 - 4) NE PAS ALLUMER UN FEU S'IL Y A DE MAZOUT OU UNE VAPEUR DE GAZ A PROZIMITE DE LA FOURNAISE.
 - 5) NE PAS EMPLOYER DES PRODUITS CHIMIQUES OU DES FLUIDES POUR ALLUMER LE FEU.

ATTENTION

- 1) NE PAS BRULER DE REBUT, NAPHTHA, GAZ, HUILE MOTEUR EN AUCUN CAS.
- 2) GARDER LA PORTE A FEU FERMEE.
- 3) EN CAS D'UN FEU HORS DE CONTROLE OU UN FEU DE CHEMINEE, FERMER TOUTES LES ENTREES D'AIR A LA FOURNAISE, POUR FERMER LE REGISTRE D'AIR A LA MAIN, DECROCHER LA CHAINE DE LA CAME DU REGISTRE APPELER LES POMPIERS ET SE PREPARER A QUITTER LA MAISON, AVANT DE COMMENCER UN AUTRE FEU DANS LA FOURNAISE, CORRIGER LE PROBLEME.
- 4) NETTOYER REGULIEREMENT L'ECHANGEUR DE CHALEUR, LE TUYAU ET LA CHEMINEE AFIN D'EVITER LA FORMATION DE CREOSOTE. IL FAUT GARDER LE TUYAU ET LA FOURNAISE, EN BONNE CONDITION D'OPERATION.
- 5) GARDER LE BOIS ET TOUT AUTRE MATERIAU COMBUSTIBLE A L'EXTERIEUR DES DISTANCES NOTEES COMME "DEGAGEMENTS MINIMUMS DE MATERIAUX COMBUSTIBLES".
- 6) **EN CAS DE PAINNE D'ELECTRICITE GARDER LE FEU PETIT - FERMER L'ACCES D'AIR, ENLEVEZ LA PORTE SUR L'ENVELOPE DU SOUFFLEUR ET LES FILTRES D'AIR POUR AIDER A LA CIRCULATION D'AIR. OUVRIR TOUS LES REGISTRES**
- 7) LE SYSTEME DOIT ETRE INSTALLE ET INSPECTE TOUS LES ANS PAR UNE PERSONNE QUALIFIEE.
- 8) AVANT LE SERVICE COUPER L'ALIMENTATION DU COURANT A LA FOURNAISE.
- 9) IL FAUT FOURNIR D'AIR A COMBUSTION AUX DEUX FOURNAISES EN TOUT TEMPS.
- 10) IL FAUT FOURNIR UNE OUVERTURE D'AIR FRAIS D'AU MOINS 3.3 mm²/w (1 1/2po. ²/1000btu/h).

COMPOSANTS ELECTRIQUES APPROUVES:

| | |
|------------------------|---------------------------------------|
| THERMOSTAT - | HONEYWELL - 7822A1258 OR EQUIVALENT |
| MOTEUR DU VOLET - | HONEYWELL - M847A1049B OR W.R. 2070-3 |
| LIMITE / VENTILATEUR - | HONEYWELL - L4064R1027 OR EQUIVALENT |
| LIMITE / VENTILATEUR - | HONEYWELL - L4064L1129 OR EQUIVALENT |
| LIMITE / VENTILATEUR - | HONEYWELL - L4064R1043 OR EQUIVALENT |

DIAGRAM B

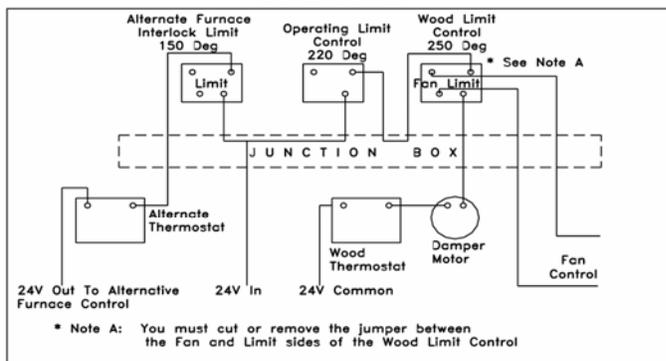
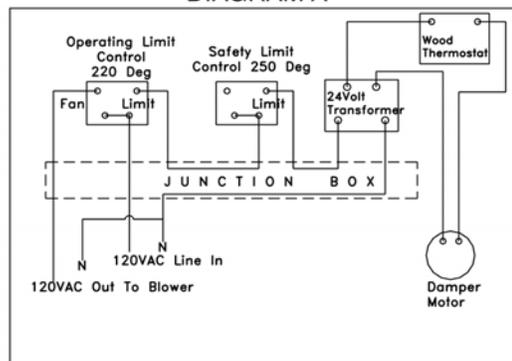


DIAGRAM A



#8052 A