

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND

BUILDING PERMIT

This is to certify that THOMASW CHILDS

Located At 224 VALLEY

Job ID: 2011-03-680-HVAC

CBL: 064 - - D - 019 - 001 - - - -

has permission to Install a Triangle Prestige Solo 110 Water Boiler

provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED.

A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be

Fire Prevention Officer

Code Enforcement Officer / Plan Reviewer

**THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
PENALTY FOR REMOVING THIS CAR**

4/24/11



PORTLAND MAINE

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Director of Planning and Urban Development
Penny St. Louis

Job ID: 2011-03-680-HVAC Located At: 224 VALLEY CBL: 064 - - D - 019 - 001 - - -

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Conditions of Approval:

Zoning

Fire

Installation shall comply with City Code Chapter 10.

Installation shall comply with NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances*; NFPA 54, *National Fuel Gas Code*; NFPA 70, *National Electrical Code*; and the manufacturer's published instructions.

Building

The installation must comply with the State of Maine gas regulations.

City of Portland, Maine - Building or Use Permit Application

389 Congress Street, 04101 Tel: (207) 874-8703, FAX: (207) 8716

PERMIT ISSUED

APR 12 2011

City of Portland

Job No: 2011-03-680-HVAC	Date Applied: 3/28/2011	CBL: 064 - - D - 019 - 001 - - - -	
Location of Construction: 224 VALLEY ST	Owner Name: THOMAS W CHILDS	Owner Address: 113 BLAKE RD STANDISH, ME - MAINE 04084	Phone: 232-7525
Business Name:	Contractor Name: Z M H S Inc, Zion Mechanical Heating Solutions	Contractor Address: P.O. Box 129 BUXTON MAINE 04093	Phone: 637-2174
Lessee/Buyer's Name:	Phone:	Permit Type: BLDG - Building	Zone: B-2
Past Use: Four Residential Dwelling Units	Proposed Use: Same: Four Residential Dwelling Units - To replace gas water boiler	Cost of Work: \$8,000.00	CEO District:
		Fire Dept: <input checked="" type="checkbox"/> Approved w/ conditions <input type="checkbox"/> Denied <input type="checkbox"/> N/A	Inspection: Use Group: Type: <i>State Gas Regs</i>
		Signature: <i>[Signature]</i> - (58)	Signature: <i>[Signature]</i>
Proposed Project Description: 224 Valley St: - replace gas water boiler		Pedestrian Activities District (P.A.D.)	
Permit Taken By: Lannie		Zoning Approval	

<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</p> <p>2. Building Permits do not include plumbing, septic or electrical work.</p> <p>3. Building permits are void if work is not started within six (6) months of the date of issuance. False informatin may invalidate a building permit and stop all work.</p>	Special Zone or Reviews <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetlands <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan <input type="checkbox"/> Maj <input type="checkbox"/> Min <input type="checkbox"/> MM Date: <i>ok with conditions</i>	Zoning Appeal <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date:	Historic Preservation <input checked="" type="checkbox"/> Not in Dist or Landmark <input type="checkbox"/> Does not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Date: <i>[Signature]</i>
	CERTIFICATION <i>3/31/11</i>		

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

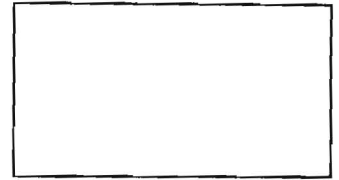
SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHON



FILL IN AND SIGN WITH INK

TX'S ✓

APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location / CBL 224 Valley St Portland Use of Building 64-D-19 Apt Date 03/28/2021
 Name and address of owner of appliance Tom Childs 113 Blake Rd
Standish me. 04084
 Installer's name and address Z.M.H.S. PO Box 129 Buxton me 04093
207-232-7525 Telephone 207-637-2174

Location of appliance:

- Basement Floor
 Attic Roof

Type of Fuel:

- Gas Oil Solid

Appliance Name:

triangle tube

U.L. Approved Yes No

Will appliance be installed in accordance with the manufacture's installation instructions? Yes No

IF NO Explain: _____

The Type of License of Installer:

- Master Plumber # _____
 Solid Fuel # _____
 Oil # _____
 Gas # PNT 808
 Other _____

Type of Chimney:

- Masonry Lined
 Factory built 1

- Metal
 Factory Built U.L. Listing # _____

- Direct Vent
 Type PV UL# _____

Type of Fuel Tank

- Oil NA
 Gas

Size of Tank NA

Number of Tanks NA

Distance from Tank to Center of Flame _____ feet.

Cost of Work: \$ 8,000

Permit Fee: \$ _____

1223

Approved

Approved with Conditions

Fire: _____

- See attached letter or requirement

Ele.: _____

Bldg.: _____

Inspector's Signature _____

Date Approved _____

Signature of Installer _____

[Handwritten Signature]

3/20/11

Job Summary Report
Job ID: 2011-03-680-HVAC

Report generated on Mar 28, 2011 3:24:15 PM

Job Type:	HVAC	Job Description:	224 Valley	Job Year:	2011
Building Job Status Code:	Initiate Plan Review	Pin Value:	982	Tenant Name:	
Job Application Date:		Public Building Flag:	N	Tenant Number:	
Estimated Value:	8,000	Square Footage:			
Related Parties:		THOMAS CHILDS		<i>Property Owner</i>	
		Zion Mechanical Heating Solutions - Zion Mechanical		<i>MECHANICAL CONTRACTOR</i>	
		Heating Solutions Z M H S Inc			

Job Charges

Fee Code Description	Charge Amount	Permit Charge Adjustment	Net Charge Amount	Payment Date	Receipt Number	Payment Amount	Payment Adjustment Amount	Net Payment Amount	Outstanding Balance
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Location ID: 10486

Location Details

Alternate Id	Parcel Number	Census Tract	GIS X	GIS Y	GIS Z	GIS Reference	Longitude	Latitude
M22199	064 D 019 001		M				-70.278411	43.651554

Location Type	Subdivision Code	Subdivision Sub Code	Related Persons	Address(es)
1				224 VALLEY STREET WEST

Location Use Code	Variance Code	Use Zone Code	Fire Zone Code	Inside Outside Code	District Code	General Location Code	Inspection Area Code	Jurisdiction Code
FOUR FAMILY		NOT APPLICABLE					DISTRICT 3	ST JOHN ST

Structure Details

Structure: 4 Unit Residential

Occupancy Type Code:

Structure Type Code	Structure Status Type	Square Footage	Estimated Value	Address
Three - Four Family Building	0			224 VALLEY STREET WEST

Longitude	Latitude	GIS X	GIS Y	GIS Z	GIS Reference	User Defined Property Value
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Permit #: 20112242

Permit Data

Location Id	Structure Description	Permit Status	Permit Description	Issue Date	Reissue Date	Expiration Date
10486	4 Unit Residential	Initialized	Install a Triangle Prestige Solo 110 Water Boiler			

yes per microfiche

Lance

Not in Que

Job Summary Report
Job ID: 2011-03-680-HVAC

Report generated on Mar 28, 2011 3:24:15 PM

Page 2

Inspection Details

Inspection Id	Inspection Type	Inspection Result Status	Inspection Status Date	Scheduled Start Timestamp	Result Status Date	Final Inspection Flag
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Fees Details

Fee Code Description	Charge Amount	Permit Charge Adjustment	Permit Charge Adj Remark	Payment Date	Receipt Number	Payment Amount	Payment Adjustment Amount	Payment Adj Comment
Job Valuation Fees	\$100.00							



prestige

Solo 110

Water Boiler



* INSTALLATION AND MAINTENANCE * M A N U A L

NOTICE

Warranty Registration Card must be filled out by the customer and mailed within thirty (30) days of installation in order to gain warranty coverage.

When receiving the PRESTIGE Solo unit, any claims for damage or shortage in shipment must be filed immediately against the transportation company by the consignee.

Leave all documentation received with appliance with owner for future reference.

⚠ WARNING

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

FOR YOUR SAFETY

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- WHAT TO DO IF YOU SMELL GAS
 - Do not try to light any appliance
 - Do not touch any electrical switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

Pre-Installation Items



Recommended Clearances

The PRESTIGE Solo is approved for zero clearance to combustibles, excluding vent and boiler piping.

- Boiler Piping - 1/4 inch from combustible materials.
- Reference the appropriate vent supplement for clearance requirements.

BEST PRACTICE

To provide serviceability to the unit it is recommended that the following clearances be maintained:

Top boiler jacket - 24 inches [610 mm].

Front - 24 inches [610 mm].

Bottom boiler piping - 24 inches [610 mm].

Rear - 0 inches

Sides - 6 inches [153 mm].

⚠ WARNING

If the clearances listed above cannot be maintained or the enclosed in which the boiler is installed is less than 85 cubic feet, the space must be ventilated. See page 6 for ventilation requirements.

NOTICE

When maintaining zero clearance or less than recommended clearances, some product labeling may become hidden and unreadable.

⚠ WARNING

When installing the PRESTIGE Solo in a confined space, sufficient air must be provided for proper combustion and venting and to allow, under normal operating conditions, proper air flow around the product to maintain ambient temperatures within safe limits to comply with the National Fuel Gas Code NFPA 54 - latest edition.

Residential Garage Installations

When installing the PRESTIGE Solo in a residential garage, the following special precautions per NFPA 54/ANSI Z223.1 must be taken:

- Mount the unit with a minimum 18 inches [458 mm] above the floor level of the garage. Ensure the burner and ignition devices / controls are no less than 18 inches [458 mm] above the floor level.
- Locate or protect the unit in a manner so it cannot be damaged by a moving vehicle.

Boiler Freeze Protection Feature

The boiler control has an freeze protection feature built in. This feature monitors the boiler temperature and responds as follows when no call for heat is present:

- 46°F Boiler circulator is ON
- 38°F Boiler circulator is ON and burner operates at low fire
- 50°F Burner OFF and boiler circulator operates for approximately 10 minutes

⚠ CAUTION

The boiler freeze protection feature is disabled during a hard lockout, however the CH circulator will operate.

⚠ CAUTION

The boiler freeze protection feature is designed to protect the boiler. The boiler should be installed in a primary/secondary piping arrangement if it is installed in an unheated space or exposed to water temperatures of 46°F or less. See Section IV for primary/secondary piping examples. See Section IX for antifreeze guidelines

SECTION II - Combustion Air and Venting

Combustion Air Contamination

 **WARNING**

If the **PRESTIGE Solo** combustion air inlet is located in any area likely to cause or contain contamination, or if products, which would contaminate the air cannot be removed, the combustion air must be reiped and terminated to another location. Contaminated combustion air will damage the unit and its burner system, resulting in possible severe personal injury, death or substantial property damage.

 **WARNING**

Do not operate a **PRESTIGE Solo** if its combustion air inlet is located near a laundry room or pool facility. These areas will always contain hazardous contaminants.

Pool and laundry products and common household and hobby products often contain fluorine or chlorine compounds. When these chemicals pass through the burner and vent system, they can form strong acids. These acids can create corrosion of the heat exchanger, burner components and vent system, causing serious damage and presenting a possible threat of flue gas spillage or water leakage into the surrounding area.

Please read the information listed below. If contaminating chemicals are located near the area of the combustion air inlet, the installer should pipe the combustion air inlet to an outside area free of these chemicals per SECTION V of this installation manual.

Potential contaminating products

- Spray cans containing chloro/fluorocarbons
- Permanent Wave Solutions
- Chlorinated wax
- Chlorine - based swimming pool chemicals / cleaners
- Calcium Chloride used for thawing ice
- Sodium Chloride used for water softening
- Refrigerant leaks
- Paint or varnish removers
- Hydrochloric acid / muriatic acid
- Cements and glues
- Antistatic fabric softeners used in clothe dryers
- Chlorine-type bleaches, detergents, and cleaning solvents found in household laundry rooms
- Adhesives used to fasten building products and other similar products

Areas likely to contain these products

- Dry cleaning / laundry areas and establishments
- Beauty salons
- Metal fabrication shops
- Swimming pools and health spas
- Refrigeration Repair shops
- Photo processing plants
- Auto body shops
- Plastic manufacturing plants
- Furniture refinishing areas and establishments
- New building construction
- Remodeling areas
- Garages with workshops

Ventilation and Combustion Air Requirements - Direct Vent

A Direct Vent appliance utilizes uncontaminated outdoor air (piped directly to the appliance) for combustion)

For Direct Vent installations, involving only the PRESTIGE Solo, in which the minimum service clearances are maintained as listed on page 4, no ventilation openings are required.

For Direct Vent, zero clearance installations involving only the PRESTIGE Solo, the space / enclosure must provide two openings for ventilation. The openings must be sized to provide 1 square inch of free area per 1,000 BTUH of boiler input. The openings shall be placed 12 inches from the top of the space and 12 inches from the floor of the space.

For installations in which the PRESTIGE Solo shares the space with air movers (exhaust fan, clothes dryers, fireplaces, etc.) and other combustion equipment (gas or oil) the space must be provided with adequate air openings to provide ventilation and combustion air to the equipment. To properly size the ventilation / combustion air openings, the installer must comply with the National Fuel Gas Code NFPA 54, ANSI Z223.1 for installations in the U.S or CSA B149.1 and B149.2 for installations in Canada.

WARNING

The space must be provided with ventilation / combustion air openings properly sized for all make-up air requirements (exhaust fans, clothes dryers, fireplaces, etc.) and the total input of all appliances located in the same space as the PRESTIGE Solo, excluding the input of a Direct Vent PRESTIGE Solo which uses combustion air directly from the outside, thus additional free area for the openings is not required. Failure to provide or properly size the openings could result in severe personal injury, death or substantial property damage.

Ventilation and Combustion Air Requirements - Category IV

A Category IV appliance utilizes uncontaminated indoor or outdoor air (surrounding the appliance) for combustion.

BEST PRACTICE

In order to reduce the potential risks associated with indoor contaminants (listed on page 5), flammable vapors and tight housing construction (little or no infiltration air), it is recommended to pipe uncontaminated combustion air directly from the outdoors to the appliance. This practice also promotes higher system efficiency by reducing heated indoor air from being exhausted from the house and replaced by cold infiltration air into the house.

For installations in which the PRESTIGE Solo shares the space with air movers (exhaust fan, clothes dryers, fireplaces, etc.) and other combustion equipment (gas or oil) the space must be provided with adequate air openings to provide ventilation and combustion air to the equipment. To properly size the ventilation / combustion air openings, the installer must comply with the National Fuel Gas Code NFPA 54, ANSI Z223.1 for installations in the U.S or CSA B149.1 and B149.2 for installations in Canada, as referenced in this section of the manual and titled Methods of Accessing Combustion Air into a Space.

WARNING

The space must be provided with ventilation / combustion air openings properly sized for all make-up air requirements (exhaust fans, clothes dryers, fireplaces, etc.) and the total input of all appliances including the PRESTIGE Solo when located in the same space. Failure to provide or properly size the openings could result in severe personal injury, death or substantial property damage.

- Not less than the sum of the areas of all vent connectors in the space.

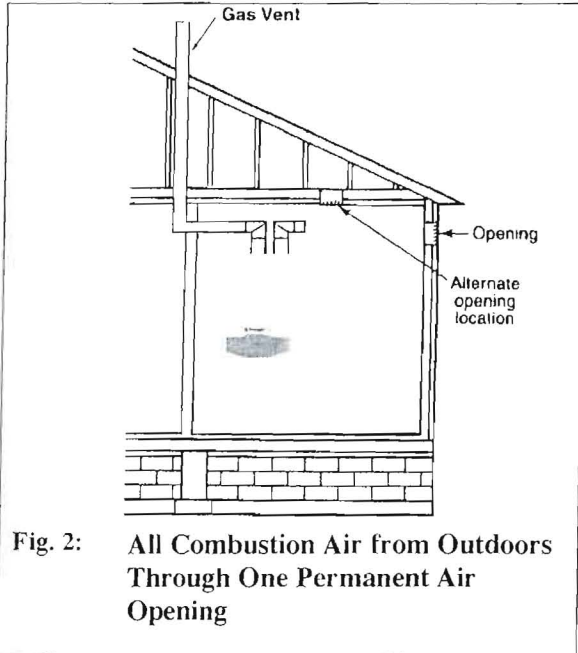


Fig. 2: All Combustion Air from Outdoors Through One Permanent Air Opening

Two Permanent Openings Method.

Two permanent openings, one commencing within 12 in. of the top and one commencing within 12 in. of the bottom of the enclosure, shall be provided. The openings shall communicate directly, or by ducts, with the outdoors or spaces that freely communicate with the outdoors, as follows:

- Where directly communicating with the outdoors or where communication to the outdoors is through vertical ducts, each opening shall have a minimum free area of 1 sq. in./4000 Btu/hr of total input rating of all equipment in the enclosure. See Fig.3.
- Where communicating with the outdoors is through horizontal ducts, each opening shall have a minimum free area of not less than 1 sq.in./2000 Btu/hr of total input rating of all equipment in the enclosure. See Fig. 4.

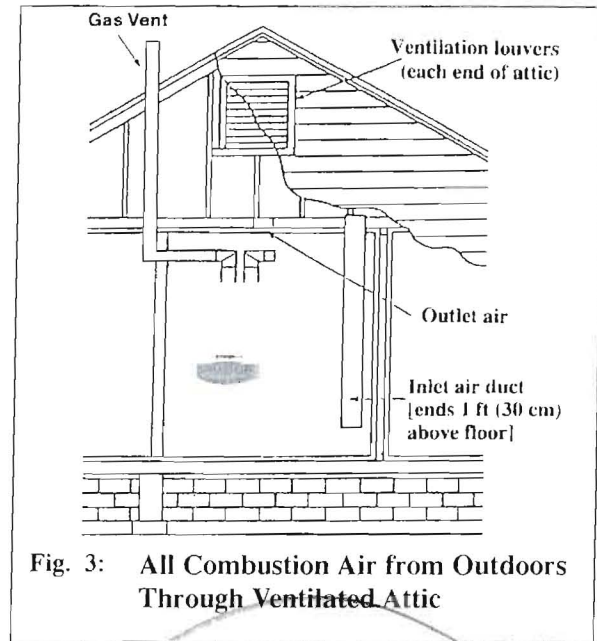


Fig. 3: All Combustion Air from Outdoors Through Ventilated Attic

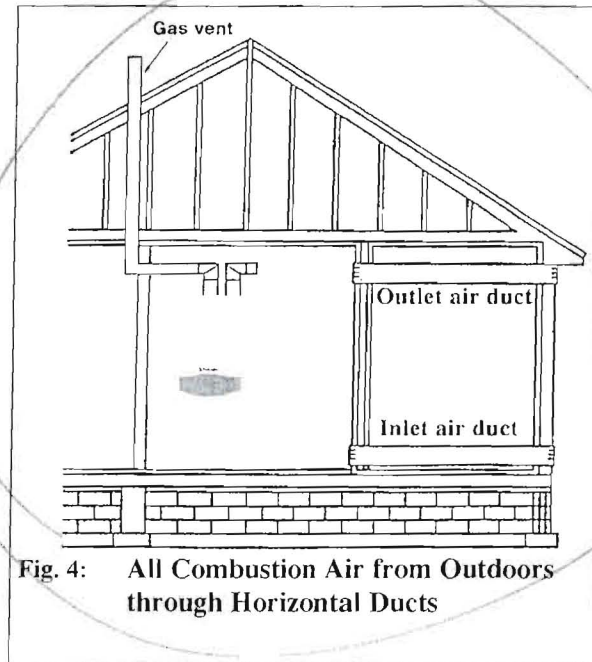


Fig. 4: All Combustion Air from Outdoors through Horizontal Ducts

Combination of Indoor and Outdoor Combustion Air

Indoor Openings: Where used, openings connecting the interior spaces shall comply with the Indoor Combustion Air section on page 7.

Combustion Air and Venting



Outdoor Opening(s) Location. Outdoor opening(s) shall be located in accordance with the Outdoor Combustion Air section.

Outdoor Opening(s) Size. Outdoor opening(s) shall be calculated in accordance with the following:

- The ratio of the interior spaces shall be the available volume of all communicating spaces divided by the required volume.
- The outdoor size reduction factor shall be 1 minus the ratio of interior spaces.
- The minimum size of outdoor opening(s) calculated in accordance with the above outdoor air section multiplied by the reduction factor. The minimum dimension of air openings shall not be less than 3 in.

DANGER

Do not install the PRESTIGE Solo into a common vent with other gas or oil appliances. This may cause flue gas spillage or appliance malfunction, resulting in possible severe personal injury, death or substantial property damage.

Combustion Air and Vent Piping

The PRESTIGE Solo requires a Category IV venting system, which is designed for pressurized venting and condensate.

The PRESTIGE Solo is certified per ANSI Z21.13 as a Category IV or Direct Vent (sealed combustion) appliance. A Category IV appliance utilizes uncontaminated indoor or outdoor air (surrounding the appliance) for combustion. A Direct Vent appliance utilizes uncontaminated outdoor air (piped directly to the appliance) for combustion.

BEST PRACTICE

In order to reduce the potential risks associated with indoor contaminants (listed on page 5), flammable vapors and tight housing construction (little or no infiltration air), it is recommended to pipe uncontaminated combustion air directly from the outdoors to the appliance. This practice also promotes higher system efficiency by reducing heated indoor air from being exhausted from the house and replaced by cold infiltration air into the house.

NOTICE

Install combustion air and vent pipe as detailed in the PRESTIGE Solo Vent Supplement included in the boiler installation envelope. Refer to optional vent kit instructions for additional vent installation instructions .

DANGER

Verify installed combustion air and vent piping are sealed gas tight and meet all provided instructions and applicable codes, failure to comply will result in severe personal injury or death.

Methods of Accessing Combustion Air Into A Space - Category IV

Indoor Combustion Air

NOTICE

The methods listed in this section for accessing Indoor Combustion Air assume that the infiltration rate is adequate and not less than .40 ACH. For infiltration rates less than .40 ACH, reference the NFPA 54 National Fuel Gas Code for additional guidance.

Opening Size and Location

Openings used to connect indoor spaces shall be sized and located in accordance with the following see Fig. 1:

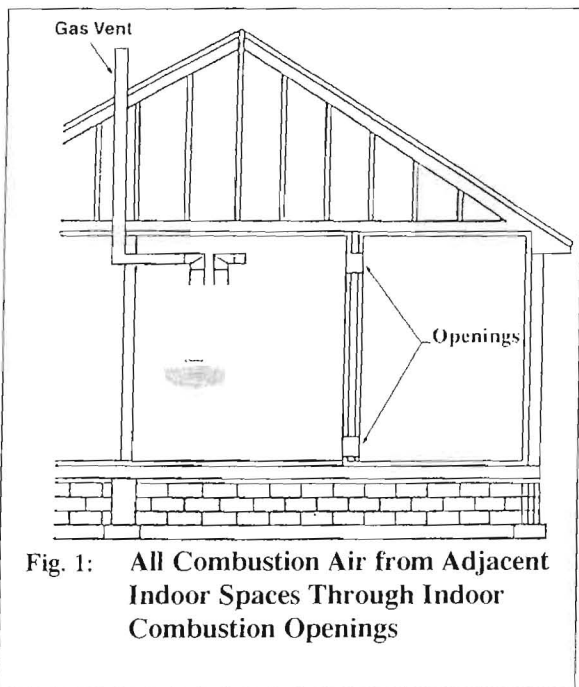


Fig. 1: All Combustion Air from Adjacent Indoor Spaces Through Indoor Combustion Openings

- Combining spaces on the same story. Each opening shall have a minimum free area of 1 sq. in./1000 Btu/hr of the total input rating of all gas utilization equipment in the space, but not less than 100 sq. inches. One opening shall commence within 12 inches of the top, and one opening shall commence within 12

inches of the bottom of the enclosure. The minimum dimension of air openings shall be not less than 3 inches.

- Combining spaces in different stories. The volumes of spaces in different stories shall be considered as communicating spaces where such spaces are connected by one or more openings in doors or floors having a total minimum free area of 2 sq. in./1000 Btu/hr of total input rating of all gas utilization equipment.

Outdoor Combustion Air

BEST PRACTICE

Isolating the combustion appliance room from the rest of the building and bringing in uncontaminated outside air for combustion and ventilation is always preferred.

Opening Size and Location

The minimum dimension of air openings shall be not less than 3 inches

Openings used to supply combustion and ventilation air shall be sized and located in accordance with the following:

One Permanent Opening Method. See Fig. 2

One permanent opening, commencing within 12 in. of the top of the enclosure, shall be provided. The equipment shall have clearances of at least 1 inch from the sides and 6 in. from the front of the appliance. The opening shall directly communicate with the outdoors or shall communicate through a vertical or horizontal duct to the outdoors or spaces that freely communicate with the outdoors and shall have a minimum free area of the following:

- 1sq. in./3000 Btu/hr of the total input rating of all equipment located in the enclosures, and