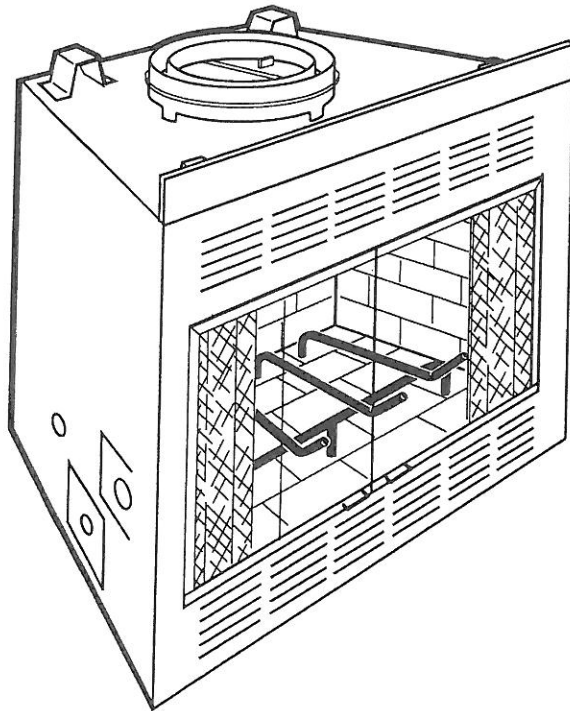




Manufactured Housing Woodburning Fireplace

Homeowner's Installation &
Operating Manual



For Models:
BC36MH, BC42MH



DO NOT DISCARD THIS MANUAL: Retain for future use.

7412972 9/09 Rev. 13

Safety Information

Please Read This Manual Before Installing And Using Fireplace

IMPORTANT: Read all instructions and warnings carefully before starting installation. Failure to follow these instructions may result in a possible fire hazard and will void the warranty.

Description

The BCMH fireplace is a solid fuel, heat circulating woodburning fireplace engineered for use in manufactured housing.

Precautions

MHSC fireplaces and component parts have been highly tested and will operate safely when installed in accordance with instructions provided in this manual. Carefully read and understand all instructions **before** beginning installation.

If you notice any damage to fireplace or component parts, immediately report damage to your MHSC dealer.

Only use MHSC components or the warranty will be voided and a fire hazard may be created.

MHSC warranty will be voided by and MHSC disclaims any responsibility for the following actions:

- **Installation of any damaged fireplace or chimney component;**
- **Modification of fireplace, chimney assembly or any component parts thereof;** (except for chase flashings as detailed in the Chimney Top installation instructions).
- **Installation other than as instructed by MHSC; or**
- **Installation and/or use of any component part not manufactured or approved by MHSC in combination or assembly with a MHSC fireplace system, notwithstanding any independent testing laboratory or other third party approval of such component parts or accessory.**

Any such action may possibly cause a fire hazard.

Consult local building codes to ensure that you are in compliance **before** installing the fireplace.

Fireplaces must be vented to the out-of-doors.

Do not obstruct or modify air inlets/outlets in any manner.

Do not install combustible materials on any of the black fireplace surround.

Burn only solid wood fuel or gas logs.

Do not install a solid fuel burning insert or other products not specified for use with this fireplace.

Drafts

A guide for home designers and installers:

To help prevent performance problems of this fireplace, such as spillage of combustion products into the living space, conditions should be avoided that cause negative pressure in the surrounding area. The fireplace should not be located in areas that can have negative drafts. These can include small rooms with frequently swinging doors, or the presence of large furnace intake return air registers located close to the fireplace.

Gas Logs

If you plan to install a gas log, the gas line should be installed before framing the fireplace. The gas line must be installed by a certified gas line installer.

Proposition 65 Warning: Fuels used in gas, wood-burning or oil fired appliances, and the products of combustion of such fuels, contain chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.
California Health & Safety Code Sec. 25249.6

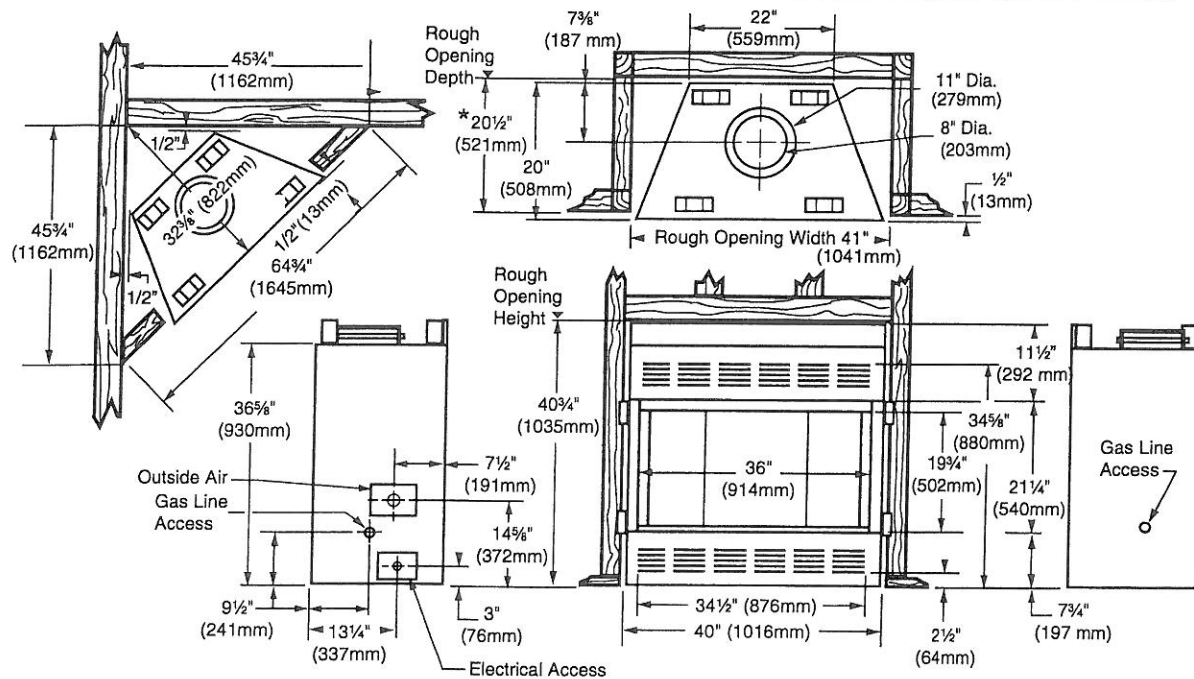
BC36MH / BC42MH Listed

UL 127 / ULC-S610
Standard for Factory Built Fireplaces

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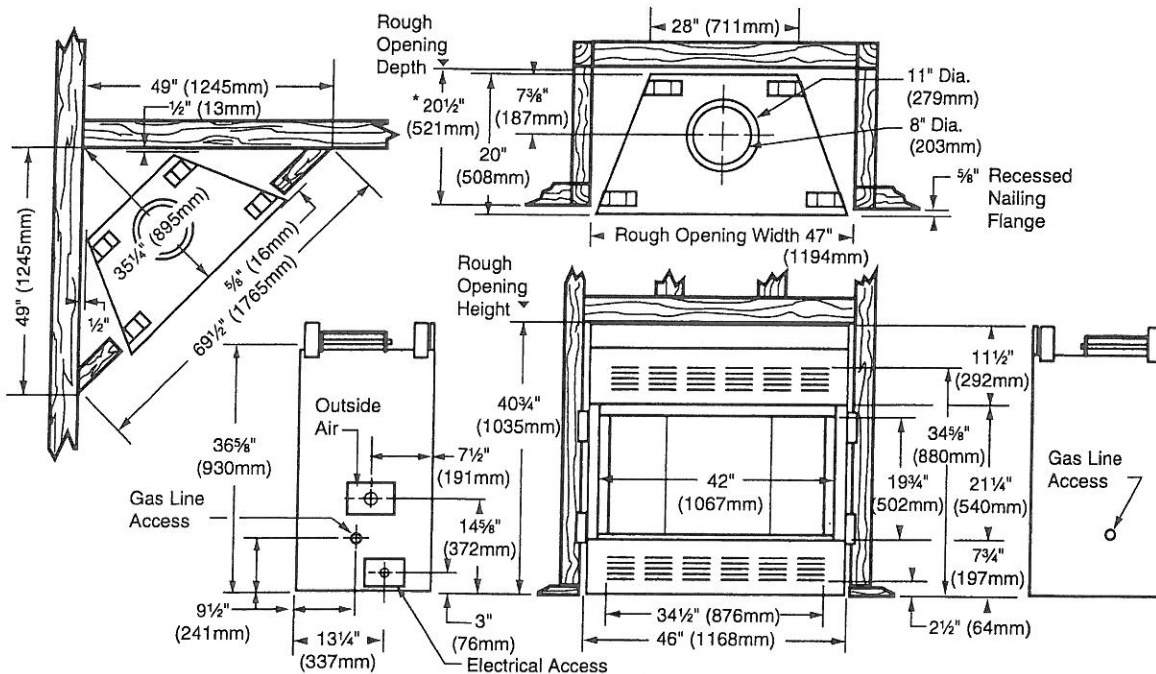
BC36MH Manufactured Housing Fireplace



* If elbows are offset to the back of the unit, chase depth will be 22 5/8" (575 mm).

Fig. 1 BC36MH specifications and framing.

BC42MH Manufactured Housing Fireplace



* If elbows are offset to the back of the unit, chase depth will be 22 5/8" (575 mm).

Fig. 2 BC42MH Series specifications and framing.

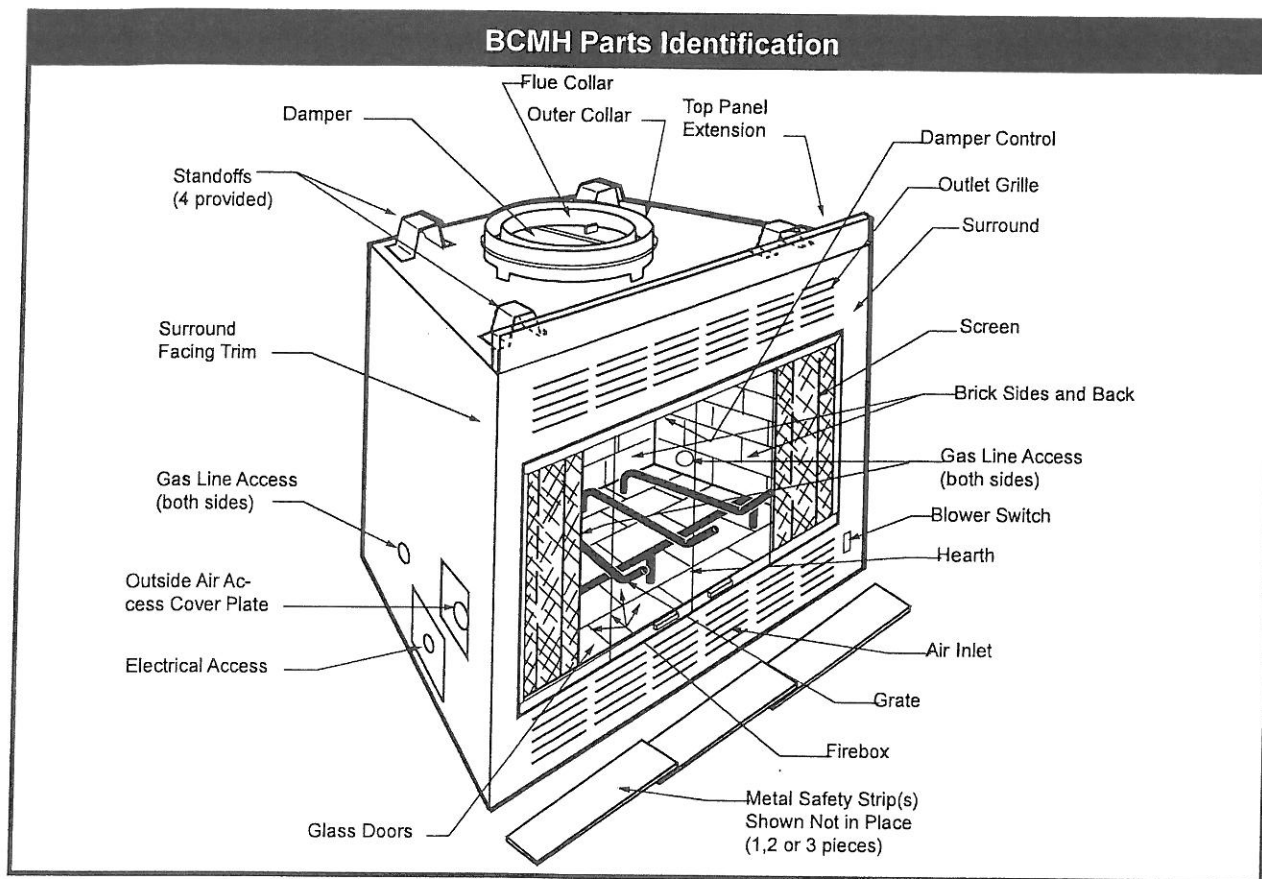


Fig. 3 Parts of the BCMh fireplace.

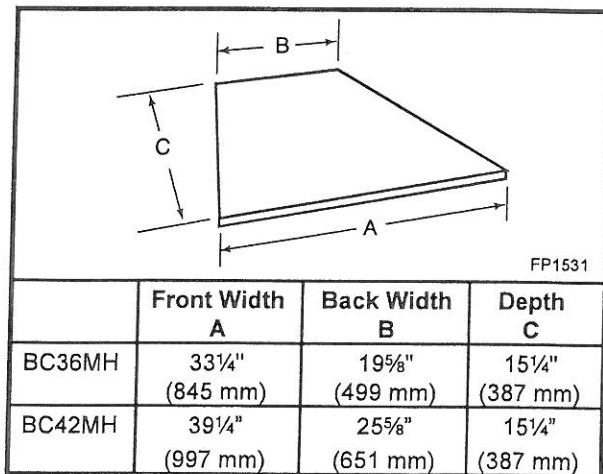


Fig. 4 Hearth dimensions.

CAUTION: The structural integrity of the wall and ceiling/roof of a manufactured home must be maintained. It is not recommended to cut roof trusses or any other structural member of the home. Consult local codes on how to preserve the structural integrity of a manufactured home.

WARNING: Do not install in sleeping area.

Required Items

The following parts are required for installation of the BCMh in a mobile home:

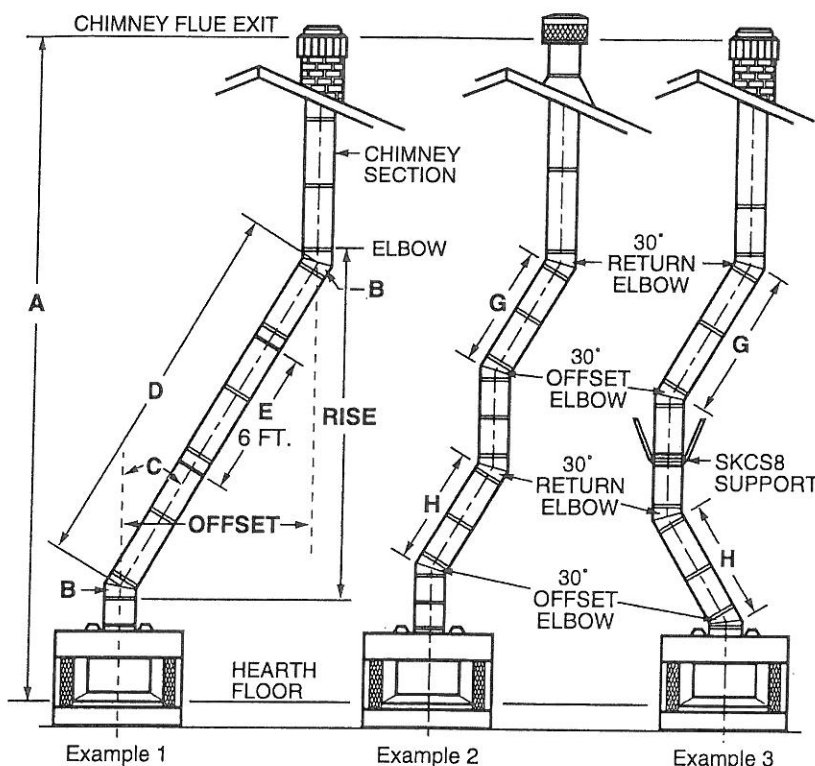
TABLE 1

Radiant Shield/Firestop	SKRSFMH*
Chimney Flashing	8-6-12*
Chimney Top	RLTSK8*
Hearth Extension	EH2416 or equal
Storm Collar	DB-8A*
(2) 36" Chimney Sections	SK83*
(2) 18" Chimney Sections	SK818*
Collars & Duct Assembly	Included with fireplace

BCMhCK is the standard Chimney Kit package that includes items marked with *

Note: Refer to Accessory Section on Page 18 for optional Chimney Package and optional Chimney Top.

Chimney Requirements - Offset Installations



Notes: G + H cannot exceed 20 feet.

Air space clearances: SK8 (2-wall = 1½" and "S" Series (3-wall) = 2"

Illustration Key

The following safety rules apply to offset installations (letters correspond with illustration above):

A. Height of the chimney is measured from the hearth to the chimney exit.

	BC36MH	BC42MH
Maximum:	90'0"	90'0"
Minimum:		
Without Elbows	12' 6"	12' 6"
With 2 Elbows*	14' 6"	14' 6"
With 4 Elbows*	21' 0"	21' 0"

B. Do not use more than 4 elbows per chimney.

Attach the straps of the return (top) elbow to a structural framing member.

The offset (first) elbow of any pair does not have straps.

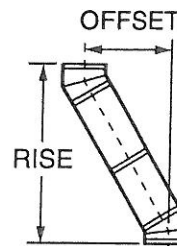
C. The chimney cannot be more than 30° (45° in Canada) from the vertical plane in any installation*.

D. The maximum length of the angled run of the total chimney system is 20 feet. (G plus H cannot exceed 20 feet.)

E. A chimney support (Model SKCS8) is required every 6 feet of angled run of chimney. Chimney supports are required for every 30 feet and 60 feet (SK8 pipe) or 20 feet and 40 feet (3-wall pipe) of vertical chimney height above the hearth.

Determine the offset distance of your chimney arrangement from the centerline of the fireplace to the centerline of the chimney where it is to pass through the first ceiling.

NOTE: This offset distance may not be your full offset distance. See Examples 2 and 3.



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30° Elbow Offsets

1'	1½'	3'	4'	Chimney Support	Offset	Rise
0	0	0	0	0	3"	11"
1	0	0	0	0	8¼"	20"
0	1	0	0	0	11¼"	25¼"
2	0	0	0	0	13½"	29¼"
1	1	0	0	0	16½"	34¼"
0	0	1	0	0	20¼"	40¾"
2	1	0	0	0	21¾"	43½"
0	0	0	1	0	26¼"	51¼"
0	1	1	0	0	28½"	55¼"
1	0	0	1	0	31½"	60¼"
0	1	0	1	0	34½"	65½"
0	0	2	0	0	37½"	70¾"
1	1	0	1	1	41½"	77¾"
0	0	1	1	1	45"	83¾"
0	1	2	0	1	47¼"	87½"
0	0	0	2	1	51"	94"
0	1	1	1	1	53¼"	98"
0	0	3	0	1	56¼"	103¼"
0	1	0	2	1	59¼"	108½"
0	0	2	1	1	62¼"	113½"
0	1	3	0	1	64½"	117½"
0	0	1	2	1	68¼"	124"
0	1	2	1	1	70½"	128"
0	0	0	3	1	74¼"	134½"
0	1	1	2	2	78"	140¾"
0	0	3	1	2	81"	146"
0	1	0	3	2	84"	151¼"
0	0	2	2	2	87"	156½"
0	1	3	1	2	89¼"	160¼"
0	0	1	3	2	93"	166¾"
0	1	2	2	2	95¼"	170¾"
0	0	0	4	2	99¼"	177¾"
0	1	1	3	2	101¼"	181¾"
0	0	3	2	2	104¼"	186¼"
0	1	0	4	2	107¼"	191½"
0	0	2	3	2	110¼"	196¾"
0	1	3	2	3	114"	203¼"
0	0	1	4	3	117¾"	209¾"
0	1	2	3	3	120"	213½"
0	0	0	5	3	123¾"	220"

Fig. 5 Chimney system requirements.
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Planning Information

Preplanning an installation is very important to ensure safety and to save time and money. An installer must predetermine where a fireplace will be set and how the chimney system will be run.

Mounting the Fireplace

A fireplace may only be mounted on the following surfaces:

- A flat combustible surface
- A raised wooden platform
- A concrete block or other solid object placed beneath each of the four (4) corners

The fireplace **must** be spaced 1/2" (13 mm) from a combustible back wall and 1/2" (13 mm) from a combustible side wall or support. Refer to Specifications, Page 3, Figure 1 and Air space Data, Figure 14, to be sure the location selected for the fireplace provides for clearance and framing restrictions.

Planning the Chimney Run

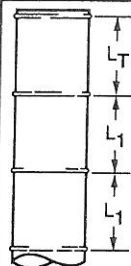
Determine how the chimney will be run, length of run and chimney components required to complete the job. **Never** install a chimney below minimum heights.

Remember, the fireplace may not be installed in a bedroom. It is not recommended to cut roof trusses. Consult the local codes on how to preserve the structural integrity of the mobile home floor, wall and ceiling/roof.

NOTE: The installed length of the chimney section is less than its total length (except for the last section installed), because of its overlap at joints. (Fig. 6)

In planning a chimney system, it is important to know:

- The height of a chimney is measured from the hearth to the exit point on the termination.
- A guy wire stabilizer is required for chimneys extending more than 6' (1.8 m) above a roof line.



MODEL SK 2 WALL CHIMNEY	TOTAL LENGTH (LT)	INSTALLED LENGTH (LI)
SK81	11½"	10½"
SK818	17½"	16½"
SK83	35½"	34½"
SK84	47½"	46½"

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Fig. 6 Installed lengths of chimney sections.

The Ten Foot Rule

Major U.S. building codes specify a minimum chimney height above the roof top. The "Ten Foot Rule" is a fire safety rule and not a draft rule. It is recommended that you always meet or exceed the "Ten Foot Rule". (Fig. 7)

The key points of the "Ten Foot Rule" are:

1. If the horizontal distance from the chimney to the peak of the roof is 10' (3 m) or less, the top of the chimney must be at least 2' (610 mm) above the peak of the roof, but never less than 3' (914 mm) in height above the highest point where it passes through the roof.
2. If a horizontal distance from the chimney to the peak of the roof is more than 10' (3 m), a chimney height reference point is established on the surface of the roof a distance of 10' (3 m) from the chimney in a horizontal plane. The top of the chimney must be at least 2' (610 mm) above the reference point, but never less than 3' (914 mm) in height above the highest point where it passes through the roof.

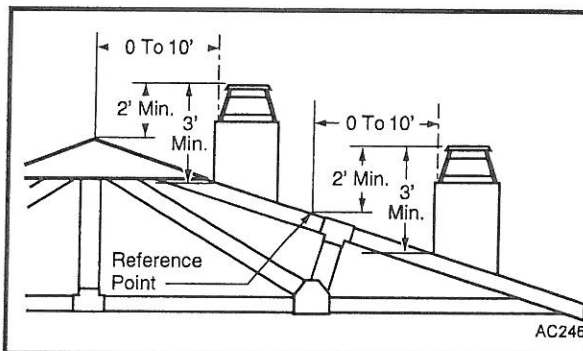


Fig. 7 Ten Foot Rule illustration.

Installation

Install Electrical Connection

CAUTION: All wiring shall be done by a qualified electrician and shall be in compliance with all local, city and state building codes.

IMPORTANT: To prevent electrical shock, the power for the home must be disabled. This can be accomplished by positioning the circuit breaker to off.

The BCMH is equipped with a factory installed FK-12 fan and the EB1 junction box. The fan requires 120V AC, 60Hz wiring to be run to the left side of the unit. This should be completed before the fireplace is finished.

NOTE: Check local building codes to determine if a junction box is required at the romex pigtail/house wire connection.

Chimney Setup

Since you have already preplanned the chimney run, you should know exactly how the installation is to be accomplished - how much pipe is required and the type of termination to be used.

CAUTION: Report to your dealer any parts damaged in shipment, specifically check the end connection of chimney sections.

Straight-Up Chimney Installation

To mark the centerline of the flue, put the fireplace in final position and measure out from the wall $7\frac{1}{8}"$ (200 mm). Mark a spot on the ceiling directly above the fireplace. Draw a line parallel to the back wall through this mark. (Fig. 8) Using a plumb bob positioned directly over centerpoint of fireplace flue collar, mark the ceiling to establish the chimney centerpoint. (Fig. 8)

Ceiling Chimney Hole

Drive a nail up through the ceiling at the marked chimney centerpoint. Check where the hole will be cut for ceiling joists and any other obstructions such as wiring or plumbing runs. If necessary, reposition the chimney and/or the fireplace to better accommodate these joists and/or obstructions. Remember: it is not recommended to cut roof trusses, as the structural integrity of the mobile home floor, wall and ceiling/roof must be maintained.

Cutting the Hole

Cover fireplace collar opening and cut proper sized chimney hole in ceiling. (Fig. 9)

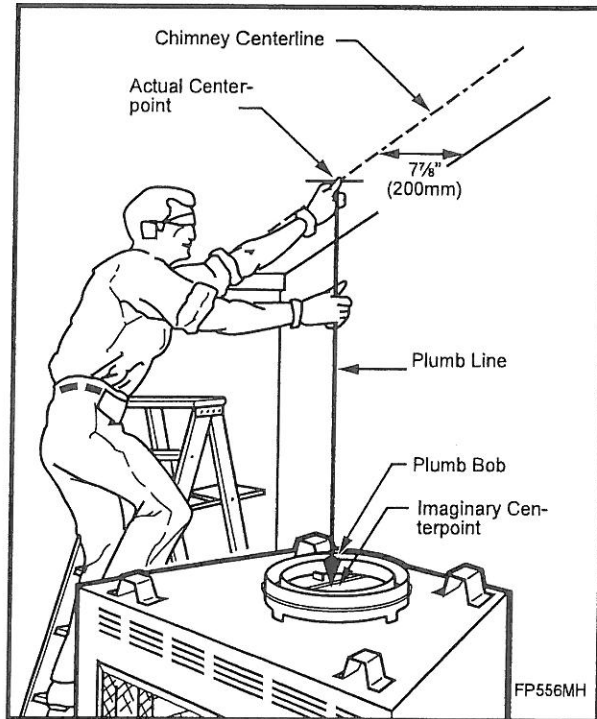


Fig. 8 Locate centerline of chimney with plumb line.

Framing the Ceiling Hole

Frame the ceiling chimney hole as shown in Figure 6. It is good practice to use framing lumber that is the same size as the ceiling joists.

The inside dimension of the frame must be the same as the hole size in order to provide the required $1\frac{1}{2}"$ (38 mm) air space between the outside diameter of the chimney and the edges of the framed ceiling hole.

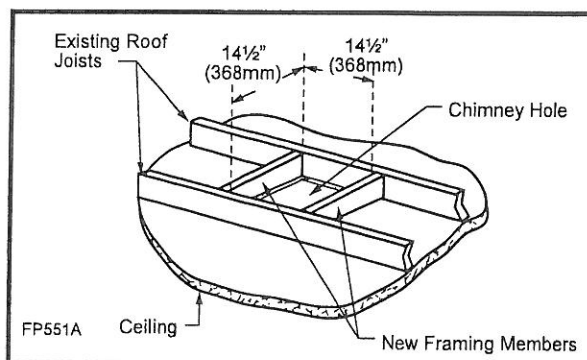


Fig. 9 Typical frame for ceiling chimney hole.

Positioning, Safety Strips, Securing The Fireplace

Slide fireplace into position.

Lift the fireplace front slightly and slide the metal safety strips under front bottom edge about 1½" (38 mm), allowing the remainder to extend in front of firebox. Overlap strips at least 1/2" (13 mm) to provide a positive joint. (Flat safety strips are packed with fireplace) (Fig. 10)

Safety strips are used to ensure that any combustible materials in front of the fireplace are protected even though a noncombustible hearth extension is required.

If fireplace is to be elevated above the floor, a "Z" shaped metal safety strip must be fabricated and used to protect combustible surfaces in front of the fireplace. This "Z" shaped safety strip is not provided but must be fabricated of metal with each horizontal leg at least 1½ inches wide and equal in length to the metal strips provided with the fireplace.

NOTE: Safety strips are not required over noncombustible floors where all supports at the base of the fireplace are noncombustible.

To prevent shifting of the fireplace and to maintain sealing (described later), standoffs are supplied on the fireplace. To level the box and secure it firmly in place, place a nail up through standoffs into header as shown in Figure 11. This will help to stabilize the fireplace.

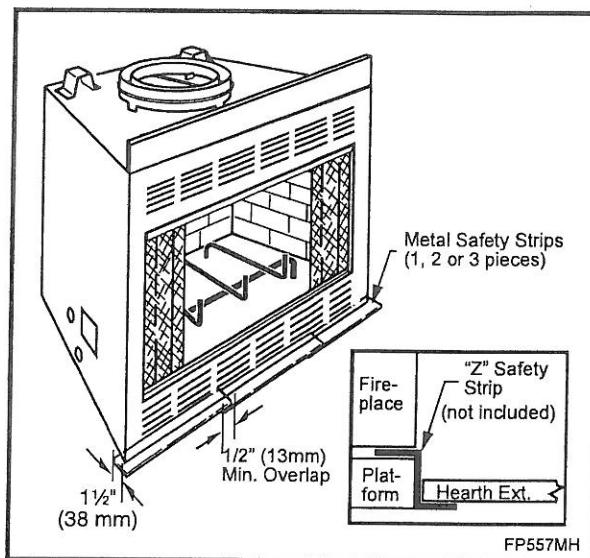


Fig. 10 Safety strip installation.

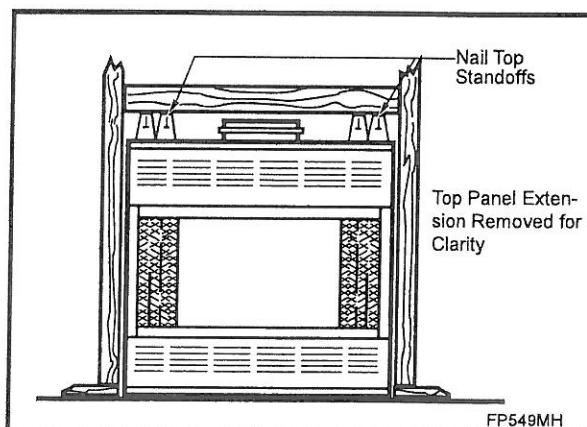


Fig. 11 Fasten fireplace in position.

Installing Outside Air System

It is necessary to install outside air in your mobile home fireplace. Through this system, outside air is drawn into the fireplace where it supplies the air for combustion.

The Outside Air Kit is shipped with the fireplace. A 48" (1219 mm) flexible duct section is provided with each unit.

All MHSC mobile home approved fireplaces use 6" (159 mm) outside air duct systems.

Planning the Installation

Plan the location of the duct termination (purchased separately) of the Outside Air System, and the path of the interconnecting duct.

Duct run must be limited to a maximum distance of 20' (3 m) from the fireplace pipe collar to duct termination. This will provide the least restriction to air flow. No more than two 90° elbows can be used. Duct run may be horizontal, vertical inclined downward or upward, or any combination of these. Upward vertical duct runs must be limited in height to one (1) foot above the fireplace before being run horizontally and terminated out-of-doors. (Fig. 12)

The duct termination should be located so it is exposed to an out-of-doors ventilation opening of at least 100 square inches. If the duct termination is located below the mobile home, be sure the termination area has the same size ventilation opening.

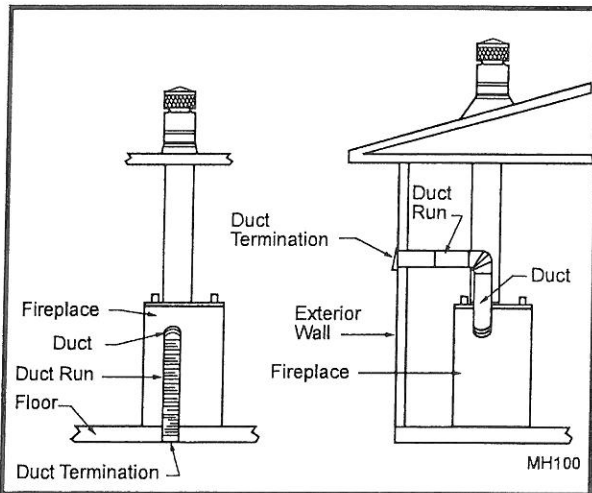


Fig. 12 Typical duct installations.

The duct termination must be located so it does not compete for air flow with exhaust fans, gas vent hoods or other air consuming devices or appliances. It must not be blocked by rafters, insulation materials, shrubs or drifting snow.

CAUTION: Do not install termination into a garage or other area that could contain flammable liquids or fumes, or into an attic space.

Installation

Install the flex duct to connect the fireplace collar on left side of fireplace and the termination. Be sure to follow planning guidelines detailed above. Flexible duct, straight smooth duct and elbows, or a combination of the two may be used. Secure each duct joint with three equally spaced sheet metal screws.

Use Class 1 duct material between pipe collar and duct termination.

Secure the duct run using three sheet metal screws at each joint. These screws are not provided.

Install the Termination

The outside air termination(s) should be supported in a convenient manner and in a position where it cannot become clogged with dirt or insulation.

Locate the centerpoint of the wall or floor and draw an oversized circle exceeding the duct diameter for each penetration. Cut the marked hole. Put a bead of caulking around the hole(s), install the termination and attach with small screws or nails.

Installing the Chimney System

Start by attaching the first chimney section to the collar on top of the fireplace.

Install the pipe as pictured in Figure 13. When you get a good lock, you will hear the pipe clearly snap together. Once sections are snap-locked in place, it is extremely difficult to get them apart. Make sure the pipe is firmly snapped and locked together as each pipe section is mounted.

Continue installing the pipe as required until pipe is installed up to the ceiling/roof opening.

Penetrating the Roof

Run pipe to roofline. Since chimney system must be vented to the out-of-doors, you must use an approved MHSC termination.

Locate Chimney Centerpoint On Roof

Use same procedure detailed in locating centerpoint of the flue system. Drive nail up through roof at the centerpoint. This will determine centerpoint on outside of the roof.

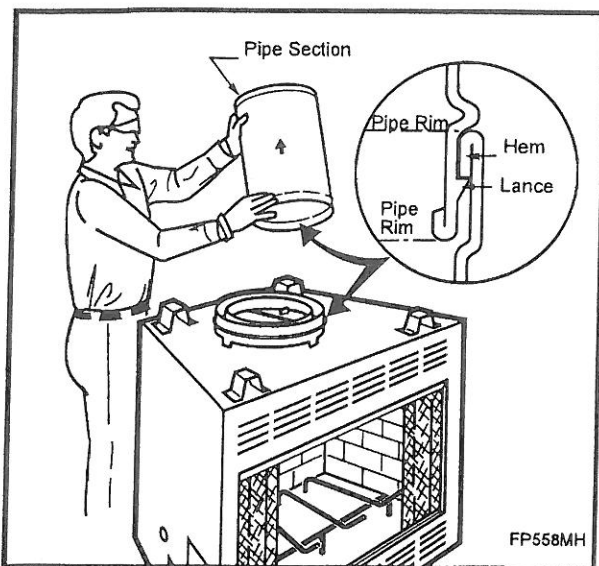


Fig. 13 Install pipe, listening for the snap-lock to fasten.

Cut and Frame Roof Hole

This step must be completed while on the roof of the mobile home. It is good practice to use plywood as weight support while on the roof.

Cut a $14\frac{1}{2}$ " x $14\frac{1}{2}$ " (368 x 368 mm) hole in the roof. There must be a $1\frac{1}{2}$ " (38 mm) air space between outermost portion of chimney sections and any adjacent combustible surfaces (Fig. 14) (Combustible surfaces include burnable materials such as: ceiling members, joists, flooring, combustible insulation and roof structures.)

WARNING: Do not pack required air spaces with insulation or other materials.

Mark an outline of the roof hole around the centerpoint of the nail. **NOTE:** Hole dimensions are horizontal dimensions, therefore, the hole size must be marked on the roof accordingly.

Cover the opening of the installed chimney so debris cannot get into the system.

Cut and frame the hole. It is good practice to use framing lumber that is the same size as the rafters. Install the frame securely because the chimney top and flashing anchored to the frame must be able to withstand heavy winds.

Before completing chimney run, you must now install the Radiant Shield/Firestop.

Installing Radiant Shield/Firestop

CAUTION: The structural integrity of the floor, wall, ceiling, roof trusses and any other structural members must be maintained.

Air space Clearances

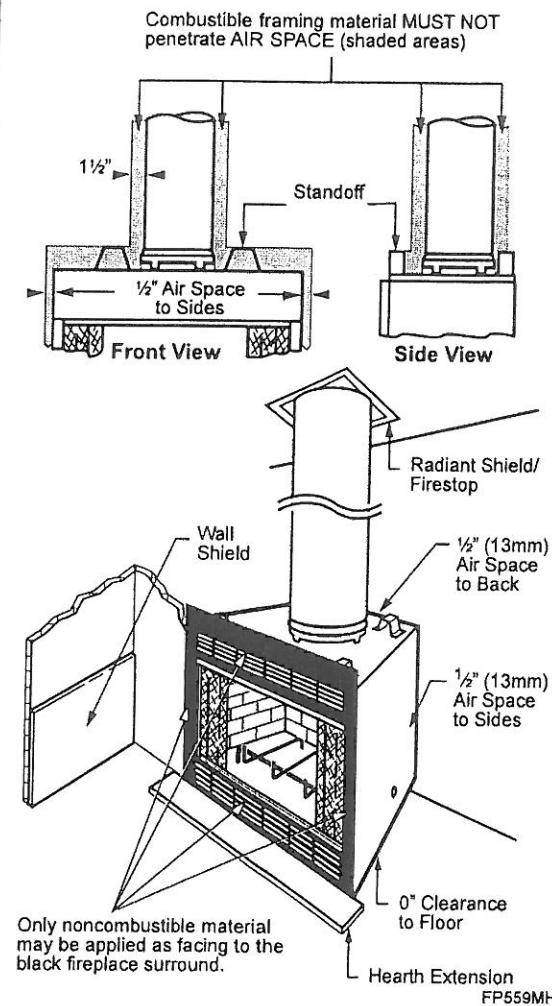


Fig. 14 Minimum clearances to combustibles.

The radiant shield/firestop is required for all manufactured (mobile) home installations. The available radiant shield/firestop may be used for flat or vaulted home ceilings. It must extend through the attic and into the roof flashing.

If the radiant shield/firestop does not extend through the attic and into the roof flashing, the TE thimble extension must be added to extend the shield into the roof flashing. However, if the attic space is ventilated and the fireplace system height from floor to the flue outlet of the termination is 13'6" or more, it is not necessary to extend the radiant shield into the roof flashing.

The radiant shield/firestop is designed to eliminate the need to cut trusses when installing the 8" (203 mm) chimney between standard roof trusses fabricated on 16" (406 mm) centers. Locate and mark the center

of the ceiling at the ceiling level. For flat ceilings, cut a 14½" (368 mm) square in the ceiling. For vaulted ceilings, a larger cutout is needed to provide sufficient clearance. The width of the cutout will still be 14½" (368 mm), but the length should be increased in order to maintain proper clearances from the chimney components to combustibles. Sealing of the space between the firestop base plate and firestop is not required. Position the with the flanges up and with the cylindrical portion extending up into the hole. Nail the radiant shield/firestop securely to the framing. The firestop has a 10" (254 mm) long sleeve that functions as an insula-

tion/heat shield. The thimble extension slips into the radiant shield and is fastened to the shield with sheet metal screws. A model 8-6-12 roof flashing, storm collar, and the RLTSK8 termination cap are required to complete the installation.

NOTE: When clearances are a concern for home transportation to site, the last piece of vent pipe and termination cap may be installed at destination.

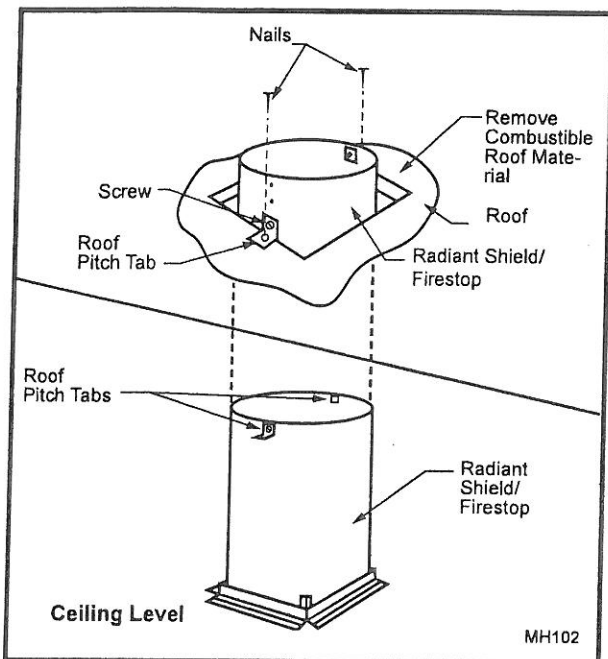


Fig. 15 Radiant Shield/Firestop into ceiling and through roof.

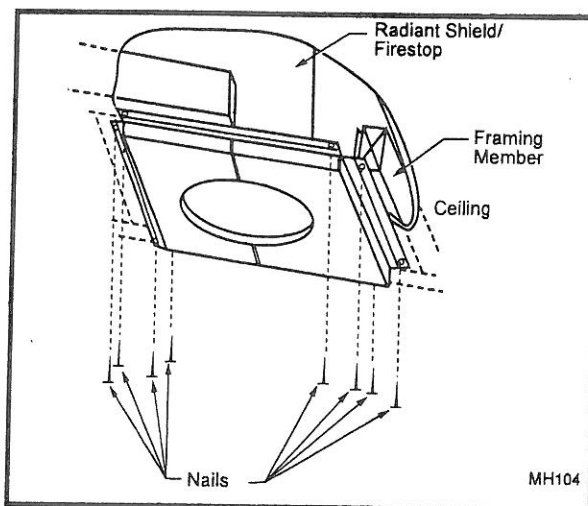


Fig. 16 Nail Radiant Shield/Firestop to framing members.

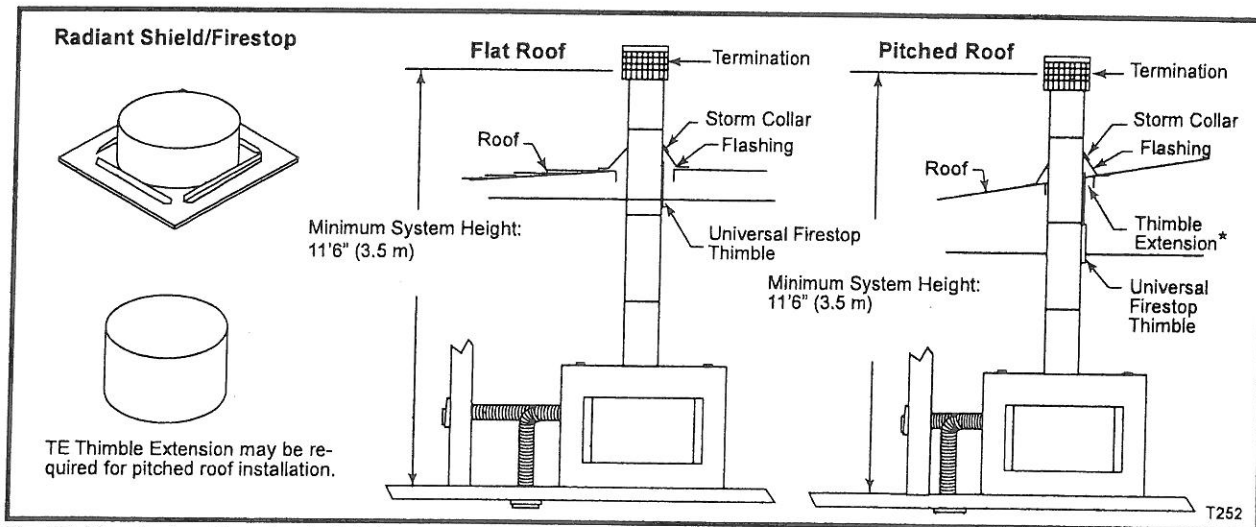


Fig. 17 Manufactured housing installations.

*May be required.

Continue Installing Pipe to Complete Run

Continue attaching pipe sections to complete system to next level always being careful that both the inner and outer pipe sections are firmly snap-locked in place before proceeding to next pipe section.

Install Remainder of Chimney Sections

Since you have preplanned the height of the termination according to the Ten Foot Rule, continue to install pipe to the predetermined height. Install chimney sections until ONE SECTION (both pipes) extend through the roof hole.

Installing Top Housing or Termination

The minimum height for the straight-up mobile home chimney is 10'6" (3.2 m) measured from the fireplace hearth to the flue exit at the Chimney Top. (Fig. 18)

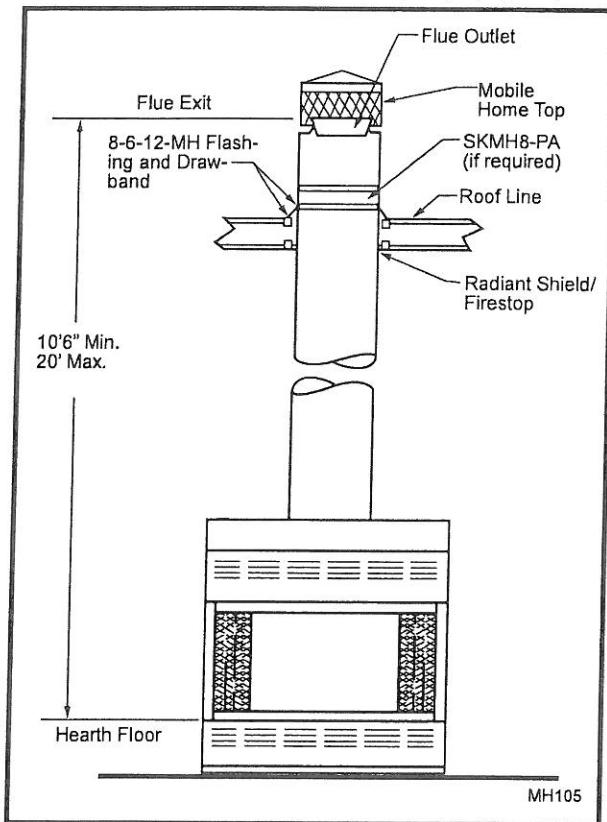


Fig. 18 The minimum height for a straight-up chimney treatment from hearth to chimney exit at top housing.

Removal of Chimney Sections for Road Clearance

To comply with over-the-road height limitations, the SKMH8-PA pipe adapter may be required for easy removal of the chimney section and chimney top. Refer to instructions provided with the SKMH8-PA.

Install Mobile Home Chimney Top

The standard MHSC RLTSK8 round top can be used to terminate the chimney in a mobile home installation.

It is recommended that guy wires be used to support any pipe and chimney assembly which extends higher than 6 feet above the roof line.

Slide the flashing (8-6-12-MH) over exposed outer pipe and exposed section of the Radiant Shield/Firestop. Mark the area it covers on the roof.

NOTE: For flat roof applications, trimming of the 8-6-12-MH is necessary. Laying the flashing on a flat surface, measure 1 inch down on the cone at the high side. Starting at this point, trim outward until you intersect the edge of the cone. Slightly lift the flashing and coat the roof area inside the markings with a good quality roof cement (not provided). Push the flashing down and press it firmly into the roof cement. Securely fasten the flashing to the roof using sheet metal screws. Coat the screw heads with the roof cement.

Insert the drawband tab through a slot in the end, tighten until the drawband is snug against the outer pipe and flashing, then bend tab back over slot to secure drawband. (Fig. 19) Apply caulking around top of drawband to seal it to outer pipe.

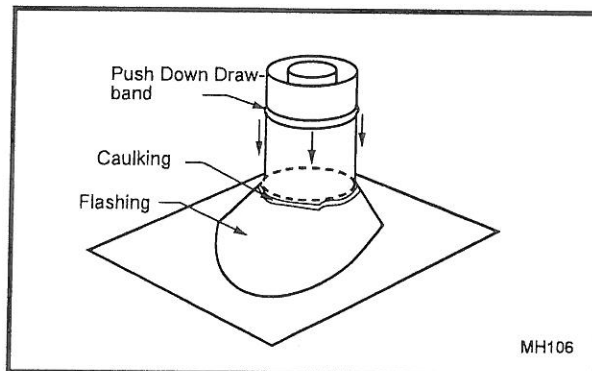


Fig. 19 Insert drawband and tighten.

For OEM factory installation, the round top termination may be site installed. Protect exposed pipe from adverse weather during transit.

Slide the telescoping pipes of the unitized SKC8-MH Chimney Top into their respective chimney pipe section. The flue section telescopes inwardly. The outer section telescopes over the outer pipe. (Fig. 20)

Using the holes in the outer sections as guides, drill three (3) 1/8" holes into the outer pipe. Fasten the body assembly to the outer pipe with the #10 x 1/2 inch screws provided.

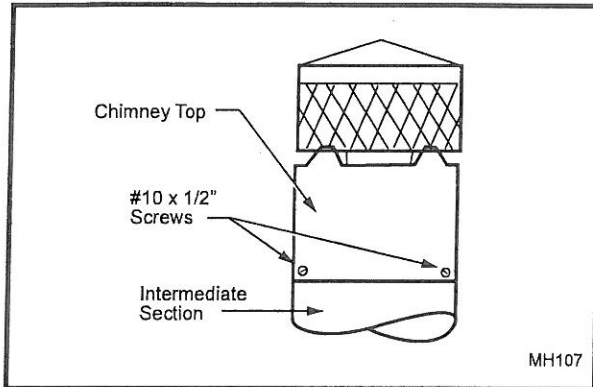


Fig. 20 Assembly of Mobile Home Chimney Top.

Finishing

CAUTION: All joints between the finished wall and the fireplace surround (top/sides) must be sealed with noncombustible material to prevent cold air leakage into the room. Only noncombustible material may be applied to the facing of the fireplace surround. (Black painted area.) (Fig. 15)

Finish Wall

Finish the wall with material of your choice. **Do not install a combustible mantel shelf less than 12" (305mm) from top of grille opening for circulating models. Do not install a mantel face plate less than 6" (159mm) from top of grille opening for circulating models.** (Fig. 21) If a combustible material is used below a flat mantel shelf, consult your local building codes for minimum clearance from top of fireplace opening to bottom of mantel shelf.

All joints (top, bottom and sides) where wall or decorative facing material meets fireplace surround must be completely sealed with a noncombustible material. (Fig. 21 or 22)

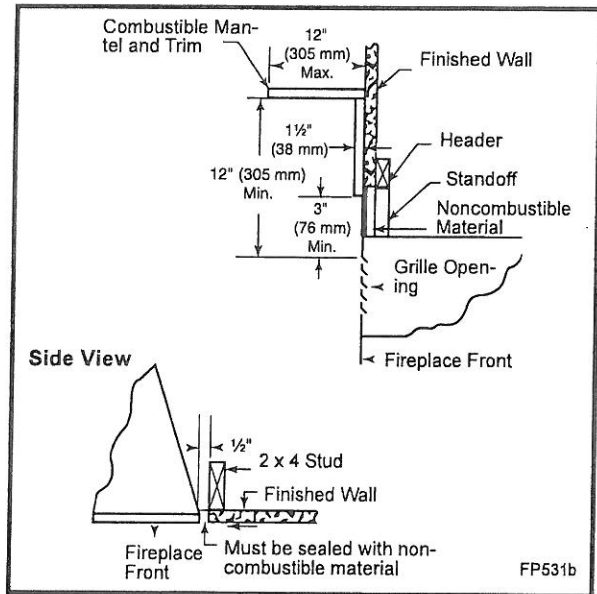


Fig. 21 Fireplace surround flush with finished wall.

NOTE: No side wall protection is required for fireplaces installed at 45° to two (2) side walls (corner installation).

Side Wall Protection

Adjacent combustible side walls that are within the minimum dimensions shown in Figure 22 of fireplace opening must be protected with MHSC Wall Shield Model SP40 or a specially built wall shield described below.

The special wall shield design described in Figure 15 is an alternate method of adding protection to side walls and can be used in place of the SP40 with the same wall clearances specified for the SP40. Rt must = 1.85 minimum.

Examples of wall shield insulation:

1. Manville - CERAFORM 126, K = .27, 1/2 inches thick.
2. MHSC - EH2416, K = .458, 1 inch thick required.

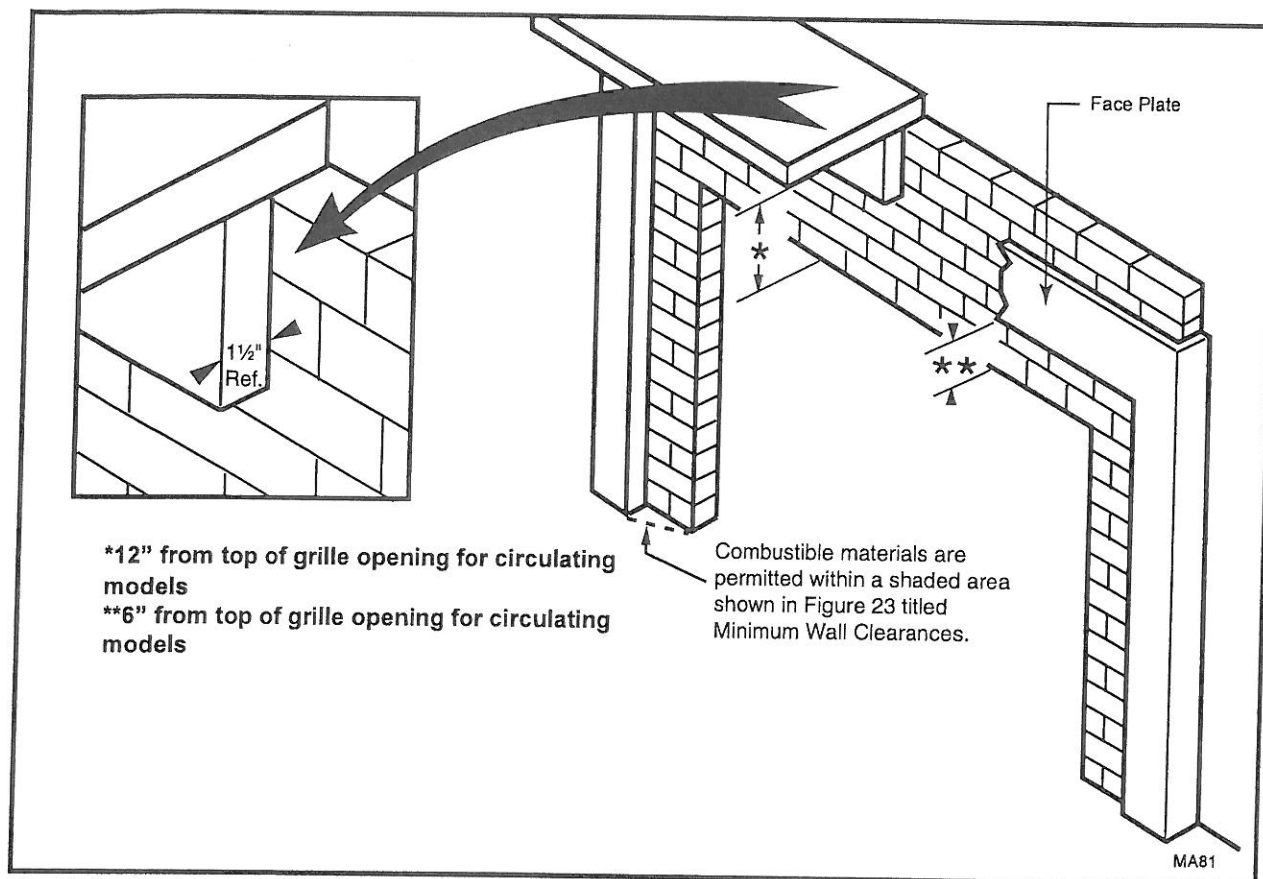


Fig. 22 Combustible mantel clearances.

Hearth Installation

A hearth extension is required to protect a combustible floor in front of the fireplace. Refer to Figure 23 for minimum dimension and mounting detail.

NOTE: Hearth Extension must not cover the air inlet/outlet opening of a fireplace.

The hearth extension described in Figure 23 must be a durable noncombustible material with a minimum (total) R_t value of 1.09; refer to Figure 24 for examples. The overall height (above a combustible floor), depth and width must be as indicated, with the extension centered to the fireplace opening.

The top of insulation must be covered with a noncombustible decorative covering or a piece of .018" minimum sheet metal, to protect hearth extension material. (Fig. 23)

Secure the hearth extension to the floor to prevent shifting, using trim molding or other similar means at three (3) outer edges. Seal crack between the fireplace hearth and hearth extension with a noncombustible material. (Fig. 23 and 25)

WARNING: Hearth extension must be installed in accordance with Figure 25 and must not cover the bottom front opening of the fireplace.

Alternate noncombustible materials may be used providing the (total) thermal resistance (R_t value) of the alternate material employed is greater than or equal to $R = 1.09$. Thermal resistance (R) or thermal conductivity (K), may be obtained from manufacturer of material. Factors are related by the formula $K = 1/R$.

T = given thickness

R = thermal resistance for a given thickness (T)

K = thermal conductivity

Noncombustible material with a lower R value may be used, provided thickness of material is sufficiently greater to maintain an equivalent (total) thermal resistance (R_t).

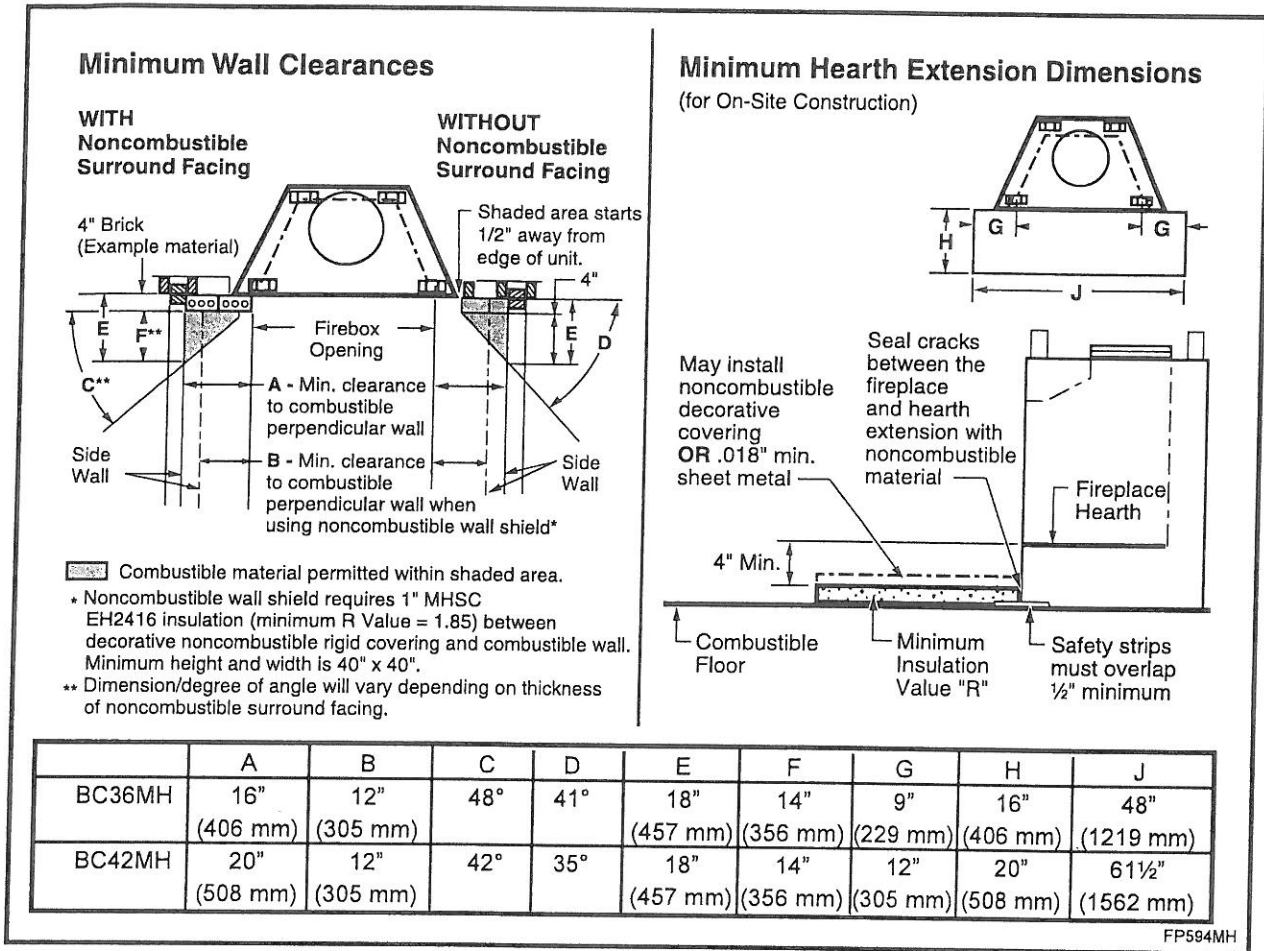


Fig. 23 Combustible side wall protection and hearth extension dimensions.

Example of Determining Hearth Extension Equivalents

To determine the thickness required for any new material:

$$\text{NEW required thickness} = \frac{\text{K of new material (per inch)}}{\text{K of listed material (per inch)}} \times \text{thickness of listed material}$$

Example of Common Brick

$$T(\text{new}) = 5.0 / 0.458 \times 0.50 \text{ in.} = 5.46 \text{ in. (new required thickness).}$$

COMMON MATERIALS AND FACTORS

MATERIAL	K*	R	MINIMUM THICKNESS
EH2416 (MHSC)	0.458	1.09	0.50 in.**
Common Brick	5.0	0.10	5.46 in.**

R Value is for one (1) inch.
 * Units of K = BTU/SQ FT/HR/°F/IN
 ** Thickness of Listed Material

FP533ADD

Fig. 24 Hearth extension material factors.

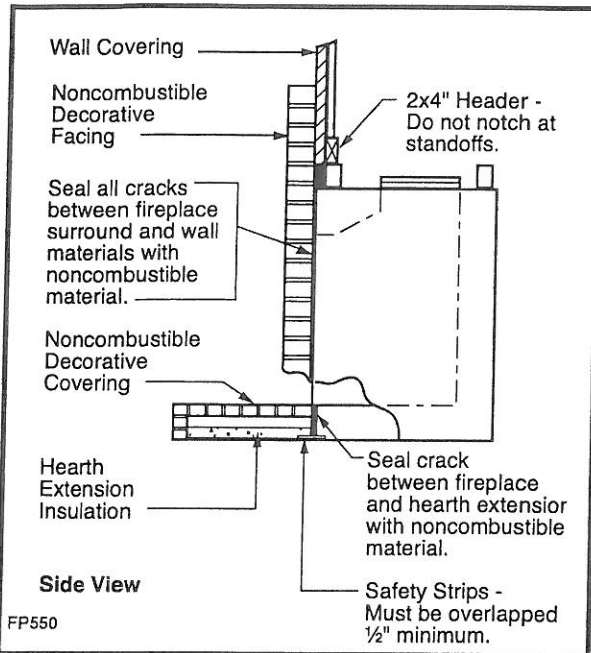


Fig. 25 Sealing gaps.

Installing the Glass Enclosure

All manufactured housing fireplaces must have glass enclosures. The BCMH fireplaces are equipped with glass door panels that are factory installed.

When the glass enclosure kit is properly installed in the fireplace opening, the door tracks will have an approximate 1/2" (13 mm) air space between tracks and surround, (at bottom and top of opening) created by the spacers. These air spaces must not be blocked. (Fig. 26) **NOTE:** Spacers are attached to the top and bottom door track.

If the doors do not align and work smoothly, the door assembly needs to be aligned. Open the door and loosen the top and bottom spring bracket slightly and adjust the door to eliminate the misalignment or binding. Position the door and retighten the retaining screw.

WARNING: Fireplaces equipped with doors should be operated only with the doors fully open or doors fully closed. If doors are left partly open, gas and flame may be drawn out of the fireplace opening, creating risks of both fire and smoke. (Fig. 27)

Make sure door assemblies are centered in fireplace opening. There should be a 3/8" (10 mm) vertical gap between glass edge and side of fireplace opening.

Check both doors for smooth operation while closing. Door bottoms should make good contact with opposing door, but not too difficult to close.

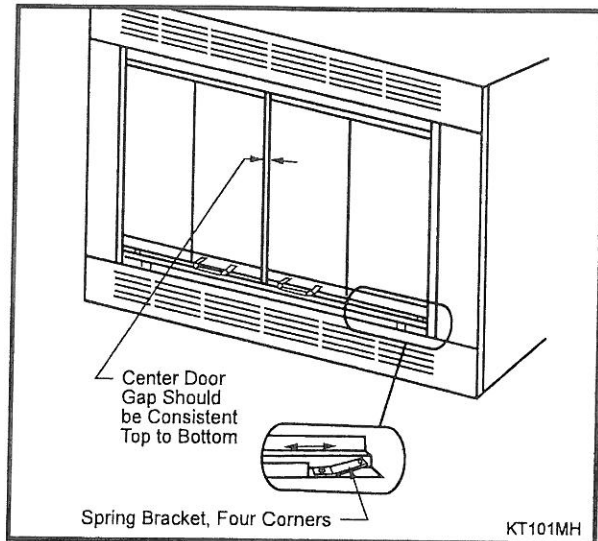


Fig. 26 Proper door alignment.

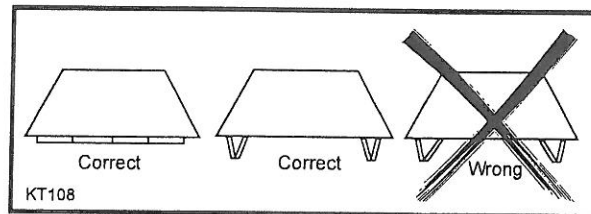


Fig. 27 Correct door position during use.

To adjust door height, loosen either top or bottom screws holding spring clips and slide extrusion backward or forward to raise or lower door. (Fig. 28)

IMPORTANT: Do not forget to remove plastic coating from finish trim to prevent discoloration.

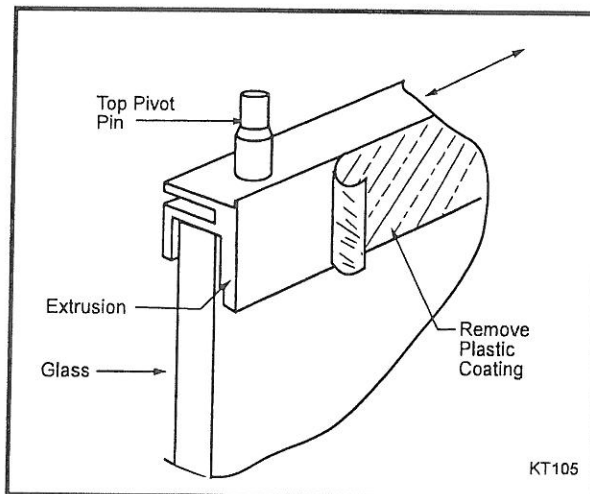


Fig. 28 Pivot pin adjustment.

Installing Line for Gas Logs

If installing an unvented gas log set, refer to statement below:

Only unvented gas log sets which have been found to comply with the Standard for Unvented Room Heaters, ANSI Z21.11.2, are to be installed in this fireplace.

MHSC fireplaces are designed to accept a 1/2" (13 mm) gas line for installation of an approved gas appliance. (MHSC manufactures a wide variety of gas logs for use in MHSC fireplaces.)

Be sure to have the appliance installed in accordance with building codes.

Gas connection may enter from either left or right side of the fireplace.

Locate appropriate gas line access hole in the outer casing of fireplace and remove insulation from gas line tube. (Fig. 29)

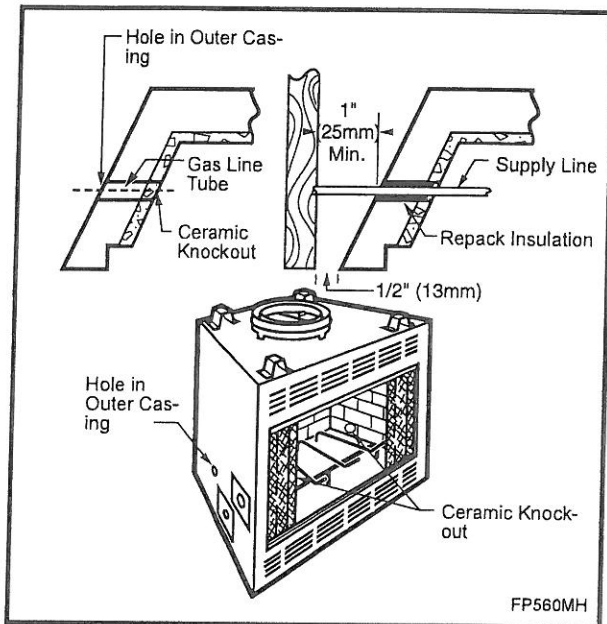


Fig. 29 Gas line access.

From inside the fireplace, locate the knockout on the firebrick -- be sure you are on the appropriate or "gas line" side of the fireplace. Using a flat bladed screwdriver or small chisel and hammer, carefully tap around the knockout until it loosens and falls out.

Install 1/2" (13 mm) certified gas pipe through opening. After gas pipe installation is complete, use insulation that was removed from gas line tube to repack space around the pipe. Material should be inserted from outside of the fireplace and packed tightly to totally seal between the pipe and tube.

NOTE: Gas pipe should not come in contact with any wood structures until it has reached a point at least one (1) inch away from fireplace side.-

NOTE: When installing an ANSI Z21.11.2 ventless appliance, the finishing material used for the mantel must be rated at 250°F or greater.

BTU input of a gas appliance installed in fireplace should be rated less than 100,000 BTU/hr.

Gas pipe installation is intended for connection to a decorative gas appliance only when 1. incorporating an automatic shutoff device and 2. complying with the Standard for Decorative Gas Appliances for Installation in Vented Fireplaces (ANSI Z21.60) or CSA draft requirements for Gas-Fired Log Lighters for Woodburning Fireplaces (Draft No. 4, August 1993)

Decorative gas appliance should be installed in accordance with the National Fuel Gas Code, ANSI Z223.1 (latest edition).



CAUTION: When using decorative gas appliance, flue damper must be set in fully open position. Glass doors must also be fully opened.



WARNING: Do not operate an unvented gas log set in this fireplace with the chimney removed.



WARNING: When installing an unvented gas log set, the MHSC model CABL or CABR 4" adjustable hood must be used.

Fan/Blower FK-12

This fan kit is carefully engineered and must be installed only on the specified fireplaces. If you modify the fan or any of its components, you may possibly create a fire hazard and will void the warranty. In addition, such action may void the coverage provided by the owner's home insurance.

The junction box, on/off switch and fan/blower are factory installed. This system requires 110-120V AC be wired to the factory installed junction box before the fireplace is permanently installed. (Fig. 30)

After connecting 120V AC to the fireplace, test blower operation. Turn the blower on by pushing the rocker switch located on the lower right louver panel to "ON". If the blower does not turn on, push switch to "OFF". Unplug power cord. Check all wires and terminals for proper connection. Plug in blower, retest.

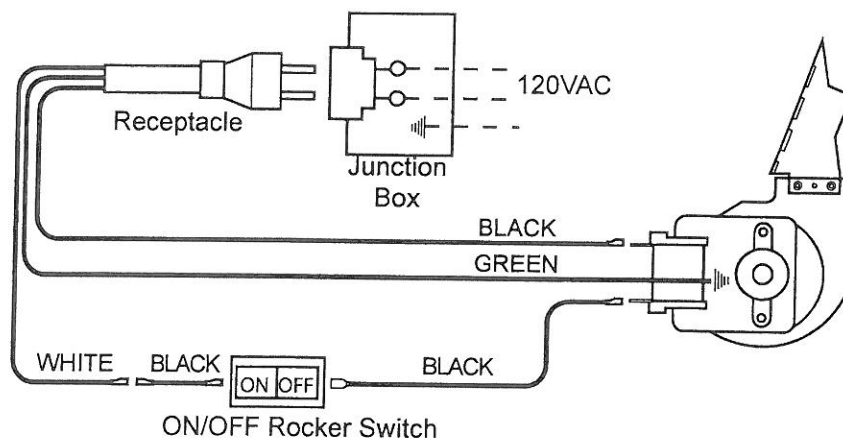


Fig. 30 FK12 wiring.

Fan/Blower Replacement

If your fireplace has glass doors, it is recommended the doors and lower track be completely removed for ease of access.

1. Remove the grate and hearth brick by carefully lifting out of the fireplace.
2. Remove access panel by carefully pulling up and out from the back center edge of the panel until the tabs at each side are free. Use caution - the panel edges may be sharp. (Fig. 31)

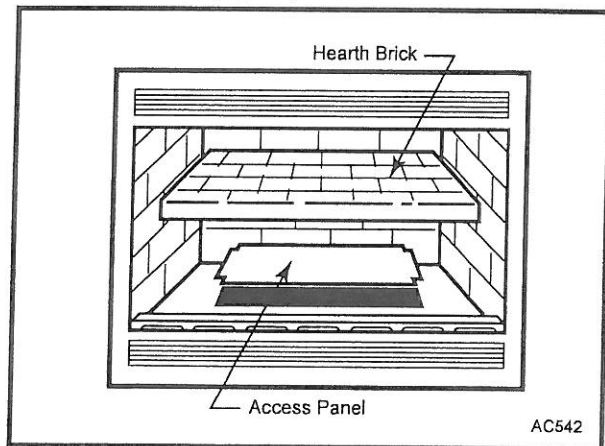


Fig. 31 Remove hearth brick and access panel.

3. Release the blower assembly from the Velcro® retainers. Disconnect the two (2) motor wires and the green ground wire.
4. With the new blower, reconnect the two (2) motor wires and the green ground wire.
5. Center fan/blower assembly over the mounting location and secure with the Velcro® strips at the back of the fireplace.

Prior to reinstalling the access panel and the hearth brick, it is advisable to operate the switch on and off to assure fan operation. If the fan does not operate and you are assured that 115V AC power is present at the receptacle, contact your dealer.

Reinstall the access panel and hearth brick by reversing order of removal.

WARNING: Never contact blower wheels during operation.

Recommended Operating Procedures

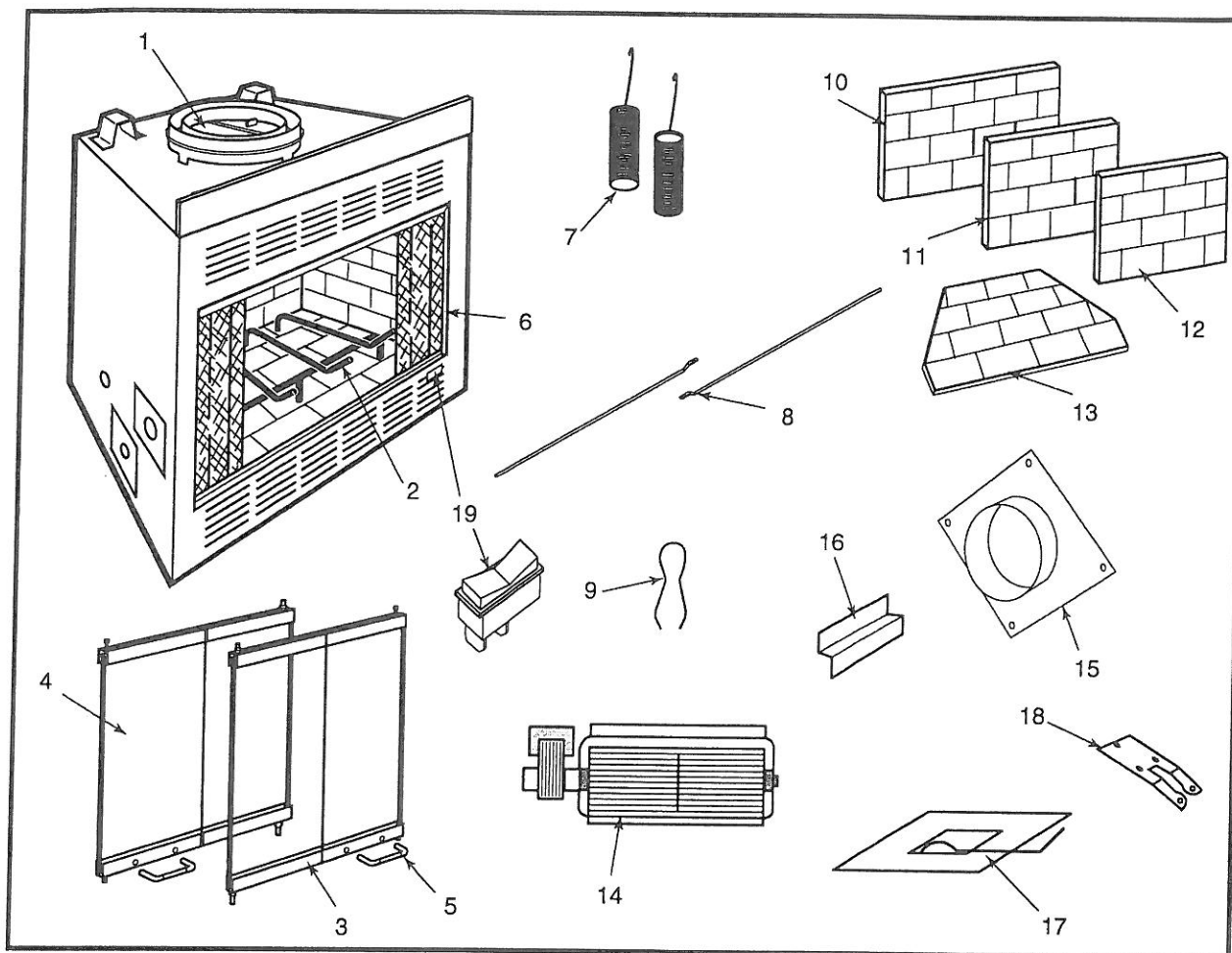
Light your fireplace with the fan off. After the fire has been burning for about 30 minutes, turn the fan on. Heated air should be delivered at the outlet grille.

Maintenance

Periodically check the fan assembly and remove any dust, dirt or obstructions.

Replacement parts and service may be obtained through your distributor or dealer. If additional information or an instruction manual is needed, contact:

MHSC
149 Cleveland Drive
Paris, KY 40361
www.mhsc.com



MHSC reserves the right to make changes in design, materials, specifications, prices and discontinue colors and products at any time, without notice.

BC36MH, BC42MH Woodburning Fireplace

Ref.	Description	BC36MH	BC42MH
1.	Damper Blade	RP199	RP199
2.	Basket Grate	3030129	3030129
3.	Glass Door Left	20002785	20002824
4.	Glass Door Right	20002784	20002823
5.	Door Handle	4497113	4497113
6.	Screen (two per fireplace)	26D0131	26D0131
7.	Screen Pulls (two per fireplace)	7554239	7554239
8.	Screen Rod (two per fireplace)	26D0132	61D0500
9.	Screen Clips (four)	7512135	7512135
10.	Firebrick - Rear	20007495	20007497
11.	Firebrick - Left	20007493	20007493
12.	Firebrick - Right	20007492	20007492
13.	Firebrick Hearth	20007494	20007496
14.	Fan Kit FK12	FK12	FK12
15.	Outside Air Duct Connector	20300253	20300253

BC36MH, BC42MH Woodburning Fireplace (continued)

Ref.	Description	BC36MH	BC42MH
16.	Top Brick Retainers	3030172	3030172
17.	O.S.A. Assy.	20003076	20003076
18.	Damper Bracket	303176	303176
19.	Switch, ON/OFF	32D0232	32D0232
20.	Door Track Assy (not shown)	20003384	20003435

Accessories

The following accessories for this appliance are available from your local MHSC distributor. Should you need additional information beyond what your distributor can furnish, contact: MHSC, 149 Cleveland Drive, Paris, KY 40361. Attn: Technical Services.

CAUTION: This fireplace and chimney assembly is a highly engineered system, and as such, must be operated only with MHSC approved components. If you use an unapproved component to make any modifications, you may create a possible fire hazard and will void the MHSC warranty. In addition, such action may void the coverage provided by the owner's insurance.

Accessory	Description	Model No.
Hearth Extension	1/2" x 24" x 16" insulation material for hearth extensions	EH2416
Chimney Sections	Used to build chimney systems	8" flue SK81 (1' long) SK818 (1½' long) SK83 (3' long) SK84 (4' long)
Chimney Kit	Includes: (2) 3' chimney sections, (2) 18" chimney sections, (1) SKRSFMH Radiant Shield/Firestop, 8-6-12 flashing, RLTSK8, DB-8A storm collar	BCMHCCK
Rear Vent Kit		7TBRHTK
Up and Out Sidewall Kit		7TDVSCCK
Vertical Flex Kit		VSK7MH2
Outside Air Termination Kit	For attachment to mobile home skirt	AK6MH
Thimble Extension	Extends radiant shield 11"	TE12

See your MHSC distributor or dealer for finishing Marble and Mantels, available in a wide selection of styles.

LIMITED WARRANTY

Factory-Build Fireplace and Components (Except Blowers)

What is Covered and For How Long

Five-Year Coverage: For five years from the date this fireplace and components are first purchased for use, MHSC will, at its option, repair or replace any defective part of this fireplace or components, or refund to you a sum not to exceed the factory retail price in effect at the time of purchase.

Ten-Year Coverage: From the sixth through the tenth year following the date this fireplace or accessory is first purchased for use, MHSC will make available to you, at our factory, a free replacement for any defective part in this fireplace or accessory.

Twenty-Five-Year Availability of Replacement Parts: From the eleventh through the twenty-fifth year following the date this fireplace or accessory is first purchased for use, MHSC will make available at our factory replacement parts for this fireplace or accessory, which you may purchase for the list price current at the time your purchase order is received.

What is Not Covered

- This limited warranty does not cover:
- Transportation or shipping cost.
- The cost of a service call to diagnose trouble.
- Painted surfaces.
- Damage or defect caused by improper installation, accident, misuse, abuse or alteration.
- Poor ventilation of smoke or gases caused by air-conditioning and heating systems, exhaust fans, or pressure differentials produced by wind.
- Broken glass components.
- Cracks in ceramic and castable parts that do not affect safe operation.
- We do not warrant this fireplace to be in compliance with your local building code. Building codes vary greatly throughout the country, and you should determine whether your local building code contains restrictions on the use of this fireplace before you purchase it.
- Blowers or fans, which are warranted separately.
- Heat loss due to the passage of heat or air through or around the fireplace.

Also, under our five year coverage, we do not pay the cost of removal and replacement of any portion of the structure in which the fireplace is situated, made necessary by the repair, removal or re-installation of the fireplace.

And under our twenty-five year warranty of availability of replacement parts, we only promise to maintain a supply of replacement parts at our factory for you to purchase.

Limitations and Exclusions

1. No one has authority to add to or vary this limited warranty, or to create for MHSC any other obligations of liability in connection with this fireplace and accessory.
2. MHSC shall not be liable for incidental, consequential, special or contingent damages you might suffer as a result of its breach of this written warranty or any implied warranty. Some states do not allow the exclusion of limitation of incidental or consequential damages, so the above limitations may not apply to you.
3. This warranty applies only to a fireplace sold and used in the United States.

IF WARRANTY SERVICE IS NEEDED...

1. Contact your supplier. Make sure you have your warranty, your sales receipt and the model/serial number of your MHSC product.
2. DO NOT ATTEMPT TO DO ANY SERVICE WORK YOURSELF.

MHSC

149 Cleveland Drive • Paris, Kentucky 40361
www.mhsc.com