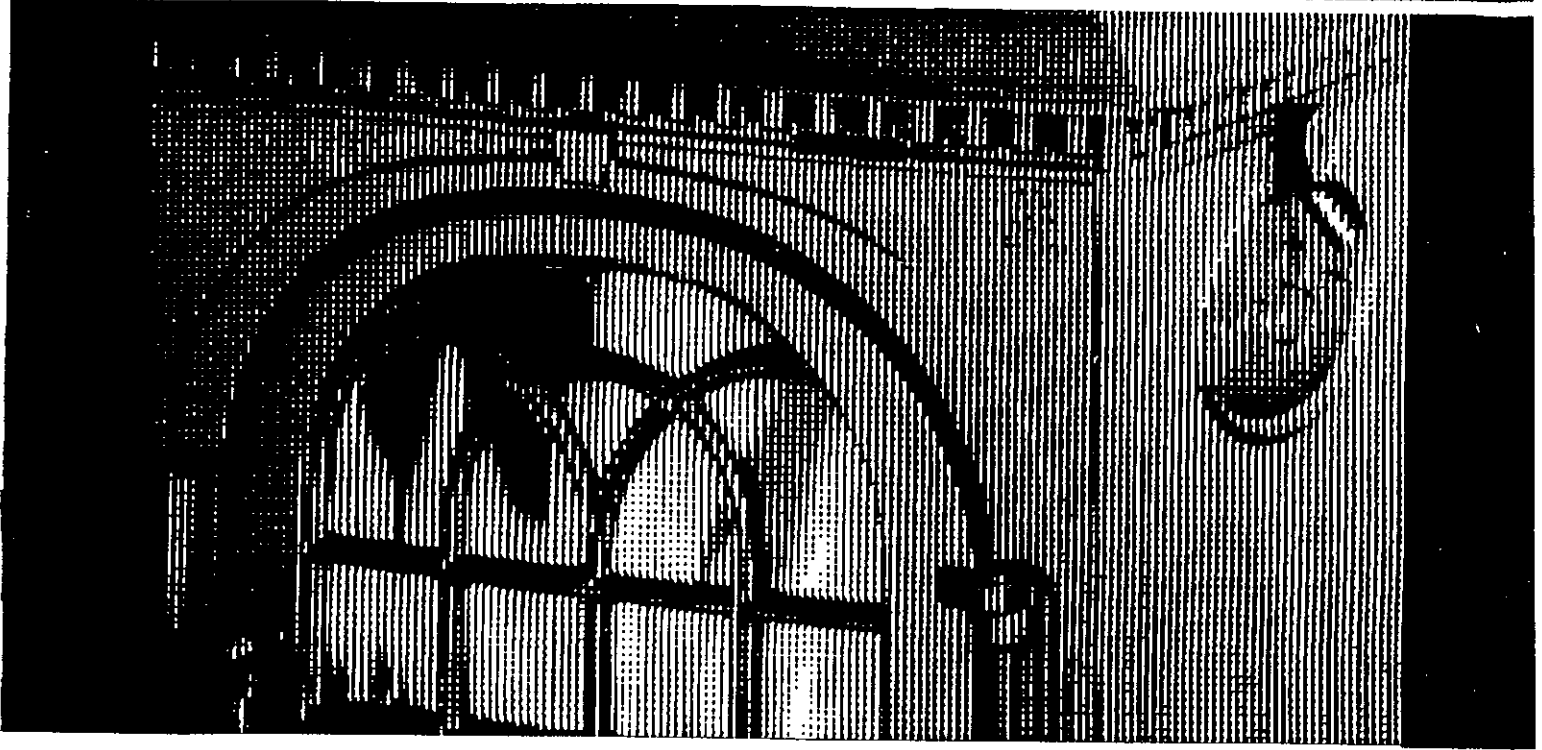


# JOTUL



# Model 8TDC

Installation & Operating Instructions



Tested & Listed by: OMNI™, Beaverton, Oregon  
Tested to UL 737, UL1482. Test date April 25, 1989. Report No. SS080-5. I.C.B.O.Q.C. No. AA-609

## SAFETY NOTICE:

IF THIS FIREPLACE STOVE IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION REQUIREMENTS IN YOUR AREA.

Jotul USA, Inc., P.O.Box 1157, Portland, ME 04104

# 1. General Information

Jotul is the world's largest manufacturer of solid fuel burning appliances and has been making cast iron wood and coal stoves since 1853. Your new Jotul stove has inherited the benefits learned from more than 125 years of producing stoves. With proper care and operation, your new Jotul stove will last many, many years.

The Owner's Manual describes the installation and operation of the Jotul fireplace #8TDC catalytic equipped wood heater. This heater meets the U.S. Environmental Protection Agency's emission limits for wood heaters sold after July 1, 1990. Under specific test conditions, this heater has shown heat at rates ranging from 10,900 to 35,100 BTU's per hour.

When installing, operating, and maintaining your Jotul fireplace stove, follow the guidelines given in these instructions. Save these instructions, and make them available to anyone using the stove.

Several areas of the U.S. require a building permit to install a solid fuel burning appliance. The National Fire Protection Association's Code 211 or similar regulations may apply to the installation of solid fuel burning appliances in your area. Your dealer has been specially selected for his knowledge of your local codes and can provide assistance in making sure your installation is safe and legal. Contact your insurance representative or building or fire officials to determine what regulations apply in your area.

## 2. Hazards Connected to the use of the Jotul Wood Stove

Any use of fire in the house represents a certain danger. With intense overfiring, temperatures on the surface of the Jotul fireplace stove can exceed 1000 degrees F. (536 degrees C).

Please comply with the following warnings.

- Never overfire the stove. If any part of the stove or chimney glows, you are overfiring, and a house fire or serious damage to the stove or chimney could result. Immediately close down the draft control if you notice this condition.
- Teach children that the stove is hot and should not be touched.
- Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid or similar liquids to start or "freshen up" a fire in this heater. They can ignite with explosive force, causing bodily injury or death. Keep all such liquids far away from the heater while it is in use.
- Never use the stove if there are combustible gases in the house. The fumes from certain cleaning fluids, adhesives, and paints are a few examples of combustible gases. Re-

member, the operating woodstove is a source of "open flame".

- Avoid creating a low pressure condition in the room where the stove is operating. Operating an exhaust fan or a clothes dryer could create a low pressure area, causing poisonous gases to come out of the stove into the room. You can prevent a low pressure condition by providing adequate outside combustion air within 24" of the stove.
- Never operate the Jotul fireplace stove with cracked or broken glass. Replace damaged glass with ceramic glass 4 mm in thickness (available from your dealer).
- Never burn trash of any kind in the stove.
- Keep combustible materials far away from the stove.
- Never modify the stove in any way which is not in accordance with the manufacturer's specifications.
- Do not dry clothes over the stove, since they could fall and ignite.
- Use only seasoned wood in your stove. Never use fireplace coal or synthetic logs.
- Always wear protective gloves when adding fuel to the fire.
- Never operate this stove without the catalyst in place.
- **This stove is not approved for use in mobile homes.**

## 3. Installation

**Safety Notice:** If this stove is not properly installed a house fire may result. For your safety, follow the installation directions. Contact local building or fire officials about restrictions and installation inspection requirements in your area.

Please read this entire manual before you install and use your new stove. Failure to follow instructions may result in property damage, bodily injury, or even death.

A safe stove installation involves several elements. These elements are: (A) the chimney connector, (B) a thimble between the chimney connector and chimney, (C) the chimney itself, and (D) protection of combustible materials in the vicinity of the stove. Each of these elements are equally important for any safe stove installation.

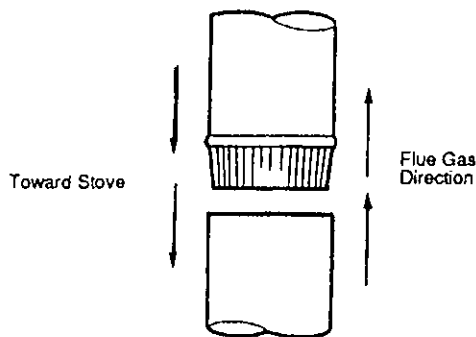
## A. Chimney Connector

This is also known as stove pipe or flue pipe. It is used to connect the stove to the chimney. The chimney connector should be 7" diameter black steel, 24 gauge minimum.

Do not use aluminum or galvanized steel. They cannot properly withstand the extreme temperatures of a wood fire and can give off toxic fumes when heated. Do not use chimney connector pipe as a chimney.

Chimney connector sections must be attached to the stove and to each other with the crimped end toward the stove (Figure 1). This allows creosote to run into the stove and not onto the outside of the pipe. All joints should be secured with three sheet metal screws to ensure that the connector won't vibrate apart in the event of a creosote fire.

For proper operation the chimney connector should be as short as possible. Horizontal lengths of chimney connector should have an upward slope from the stove of 1/4" per foot. Avoid using more than two 90 degree elbows or total runs of pipe greater than 10'.



## B. Thimble

This is a masonry or listed prefabricated device installed in combustible walls through which the chimney connector passes to the chimney. It is intended to keep walls from igniting.

### Masonry Thimble

Construction of a masonry thimble requires 12" of brick around a fireclay liner. Be sure to locate it so that the top of the chimney connector will be at least 18" below the ceiling. To construct the brick thimble you will need an opening of 32" x 32". It will be necessary to cut wall studs and install headers and a sill frame to maintain proper dimensions and to hold the weight of the brick (Figure 2). Minimum 3-1/2" (4" nominal) thick solid bricks are to be used. The fireclay liner (ASTM C35 or equivalent), minimum 5/8" wall thickness, must not penetrate into the chimney beyond the inner surface of the chimney flue liner and must be firmly cemented in place. If it is necessary to cut a hole in the chimney liner, use extreme care to keep it from shattering. Refractory mortar must be used at the junction to the chimney liner. After the assembly is complete, insert the chimney connector in the fireclay liner. Do not push it beyond the inside edge of the chimney liner because this will affect the draw of the chimney (Figure 3).

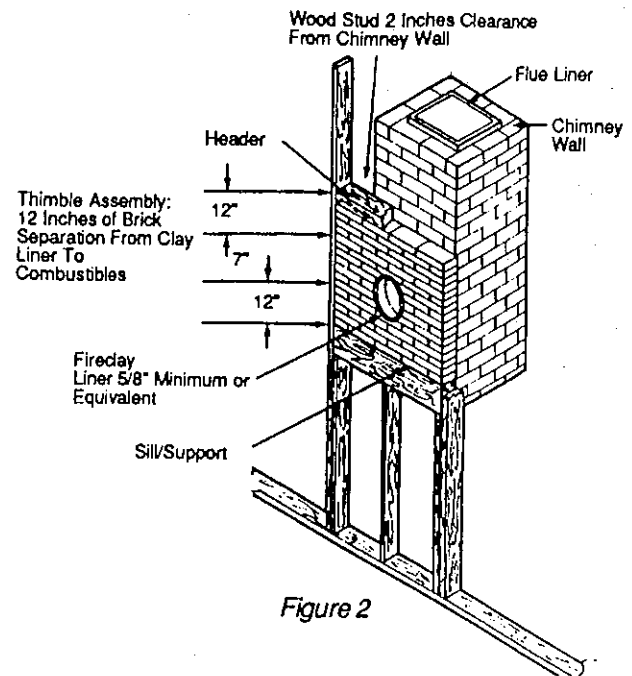


Figure 2

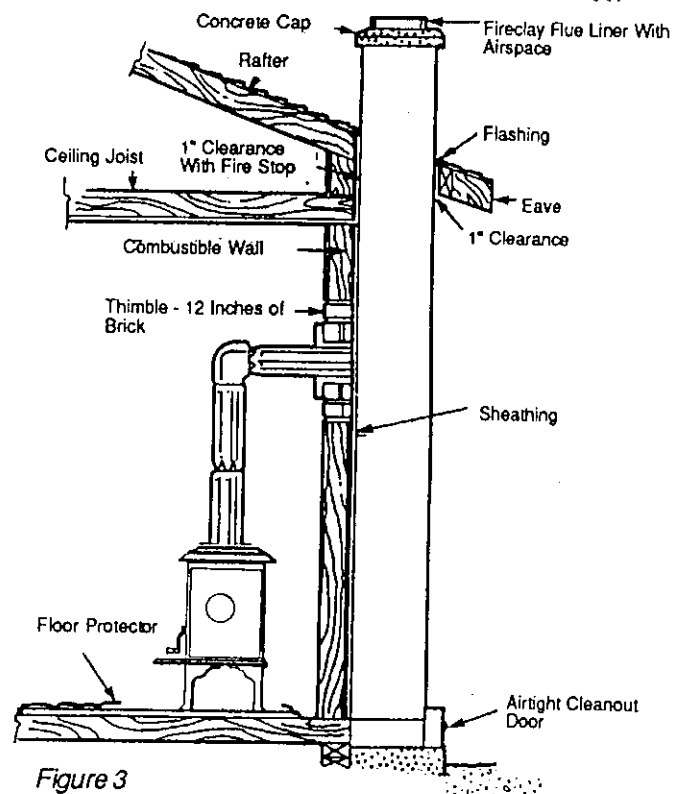


Figure 3

### Listed Prefabricated Thimbles

Several manufacturers have developed safe alternatives to the brick thimble just described. In general, these are various types of insulated metal pipes with the necessary hardware to ensure proper clearances. These offer the advantages of being lighter than the brick thimble and requiring less room. These thimbles are "listed". "Listed" means that a laboratory independent of the manufacturer has tested them and certifies that they are safe if installed according to the manufacturer's directions. Be sure if you select a prefabricated thimble system that it is listed for use with woodstoves. Figure 4 shows a typical installation using a section of insulated pipe for a thimble.

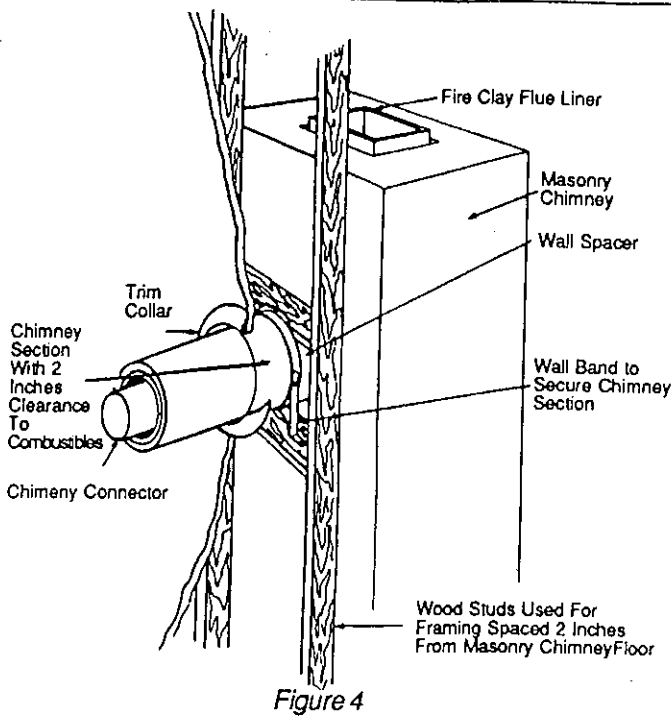


Figure 4

### C. Chimneys

There are two types of chimneys suitable for Jotul wood-burning stoves. These are either an approved masonry chimney or a listed residential type building heating appliance chimney.

When selecting a chimney type and the location for the chimney in the house, keep this in mind: it is the chimney that makes the stove work, not the stove that makes the chimney work. This is very important to remember. If you were able to set your new stove out in the yard and build a fire in it, it would be very difficult to keep the fire going without a chimney drawing air through the stove.

This is because a chimney actually creates a suction, called draft, which pulls air through the stove. There are several factors which influence draft. Some of the major factors are: height of the chimney, cross section area, temperature of the chimney, and the location of surrounding trees or buildings. In general, a short masonry chimney on the exterior of a house will give the poorest performance, and a masonry chimney inside the house will work the best.

The exterior chimney can be very difficult to warm up, and in extreme northern areas may not work at all. On the other hand, not only is an interior chimney easier to keep warm, but its heat loss is inside the house rather than outside.

This guideline gives the necessary chimney requirements based on the national code (NFPA 211). However, many municipalities have their own code which differs from the national code. Local codes can vary because of climate, altitude, or other factors. It is important that you check with your local building officials to find out what codes apply in your area before constructing a chimney.

### Masonry Chimneys

Following is a list of the more important minimum requirements for a properly constructed masonry chimney.

- The foundation must be large enough to support the intended chimney without settling.
- The masonry wall of the chimney, if brick or modular block, must be a minimum of 4" nominal thickness. A mountain or rubble stone wall must be at least 12" thick.
- The chimney must have a fireclay flue liner (or equivalent) with a minimum thickness of 5/8" and must be installed with refractory mortar. There must be at least 1/2" air space between the flue liner and chimney wall.
- The fireclay flue liner should measure at least 8" x 8" and not larger than 8" x 12". 8" x 8" is preferred. If round fireclay liners are used, the inside diameter must be 7". If an existing chimney with larger tiles is used, it should be relined with an appropriate liner.
- No other appliance can be vented into the same flue.
- An airtight cleanout door should be located at the base of the chimney.
- A chimney inside the house must have at least 2" of clearance to the combustible structure. A chimney outside the house must have at least 1" clearance to the combustible structure. Fire stops must be installed at the spaces where the chimney passes through floors and/or ceilings (Figure 5).

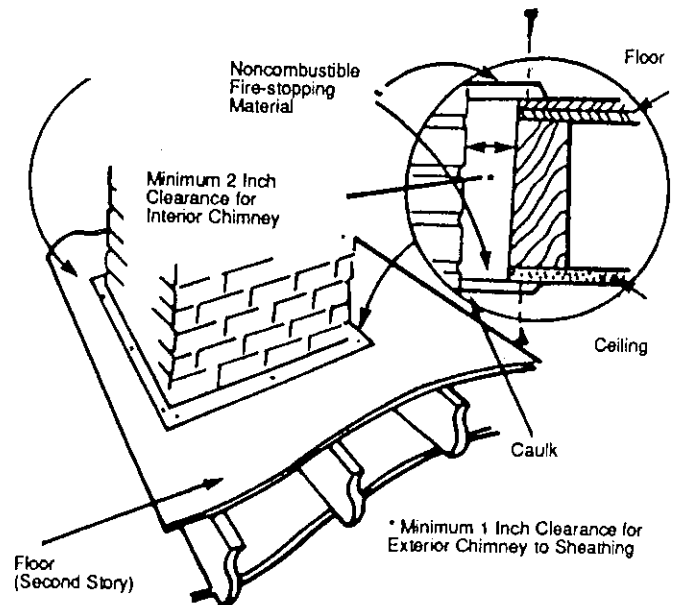


Figure 5

Remember that there must be air space around the chimney, and that insulation must be 2" or more from the chimney (Figure 6).

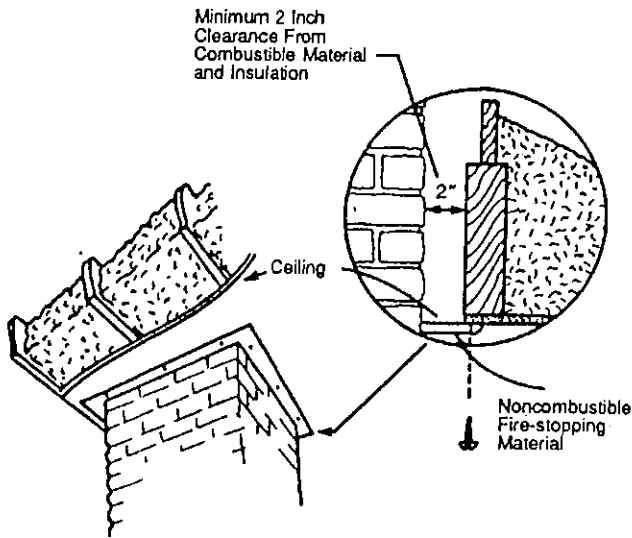


Figure 6

\* A chimney must be the required height above the roof or other obstruction for safety and for proper draft operation. The requirement is that the chimney must be at least 3' higher than the highest point where it passes through the roof and at least 2' higher than the highest part of the roof or structure that is within 10' of the chimney, measured horizontally (Figure 7).

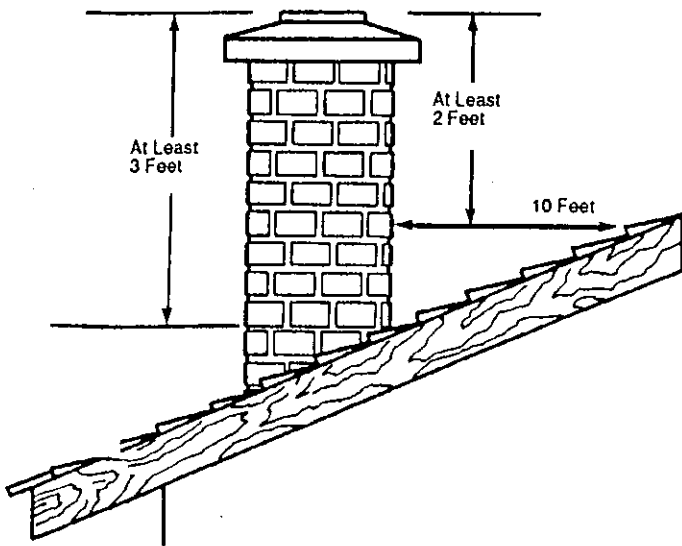


Figure 7

Chimneys shorter than 14' may not provide adequate draft. This could result in smoke spilling into the room from the door or joints in the stove or pipe. In addition, inadequate draft can cause back puffing or catalyst plugging. Too strong a draft, on the other hand, can cause excessive temperatures, damage the catalyst, and shorten burn

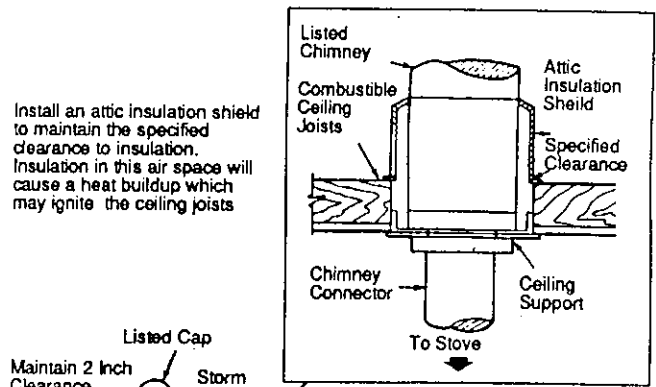
times. Excessive drafts can be corrected by having your dealer install a barometric damper set at .1" of water column. If you suspect your draft is inadequate, consult your dealer.

### Connection to a Metal Prefabricated Chimney

When a metal prefabricated chimney is used, the manufacturer's installation instructions must be followed precisely. You must also purchase (from the same manufacturer) and install the ceiling support package or wall pass through, "T" section package, firestops (when needed), insulation shield, roof flashing, chimney cap, etc. Maintain the proper clearance to the structure as recommended by the manufacturer. This clearance is usually a minimum of 2", although it may vary by manufacturer or for certain components.

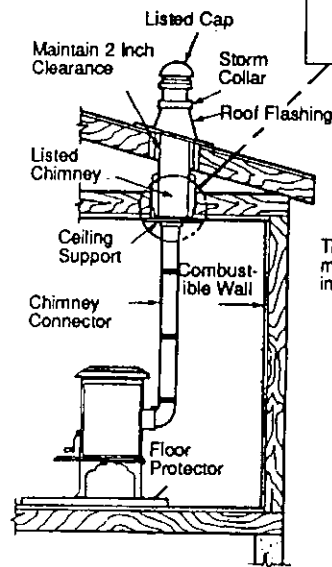
There are basically two methods of metal chimney installation. One method is to install the chimney inside the residence through the ceiling and the roof (Figures 8, 9). The other method is to install an exterior chimney that runs up the outside of the residence (Figures 10, 11). The components illustrated may not look exactly like the system you purchase, but they demonstrate the basic components you will need for a proper and safe installation.

The chimney must be the required height above the roof or other obstruction for safety and proper draft operation (Figure 7).



Install an attic insulation shield to maintain the specified clearance to insulation. Insulation in this air space will cause a heat buildup which may ignite the ceiling joists

Figure 8



This method of installation requires at a minimum a ceiling support package, an insulation shield and roof flashing.

Figure 9

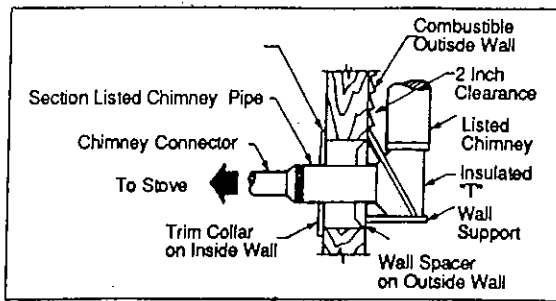


Figure 10

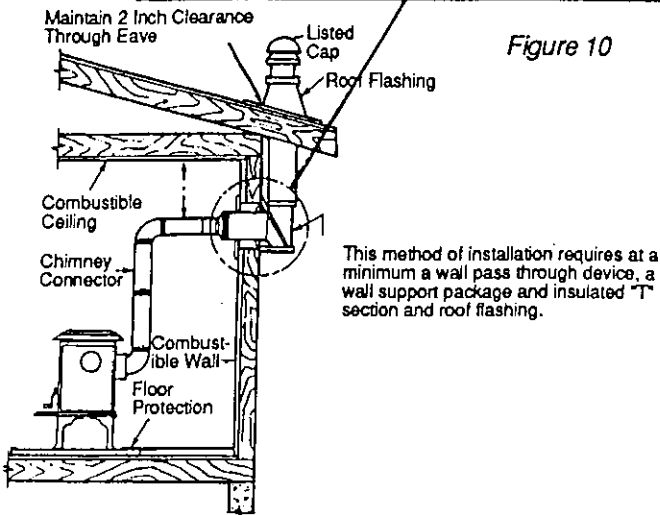


Figure 11

REMEMBER: Follow the manufacturer's installation instructions and maintain the manufacturer's specified clearance distances.

#### D. Clearances to Combustibles

Good planning for stove placement involves more than just insuring you have adequately protected combustible materials. It should also consider your comfort and convenience.

The radiant heat from your stove will warm its surroundings and, in turn, the air. Will the warm air from the stove freely rise and migrate to other areas of the house? Will the stove and hearth interrupt or disturb traffic patterns in the home? Is it convenient to bring wood to the stove? These are but a few of the questions you will want to ask when choosing a site for your stove.

A simple way to visualize the area required by the stove is to cut out a piece of newspaper the same size as the stove (25.5"x15"). Place the newspaper on the floor and select the appropriate dimensions from the following sections on floor and wall protection.

#### Floor Protection

Your stove must be placed on a non-combustible surface which extends 8" beyond the sides and back of the stove and 18" in the front of the stove. This will result in an overall base which is 41.5" wide x 40" deep (Figure 12A). This is the minimum floor protector size. Floor protection must also be used under the stove pipe and extend 2" beyond either side of the pipe (12B).

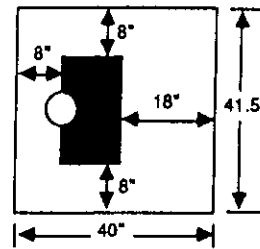


Figure 12A

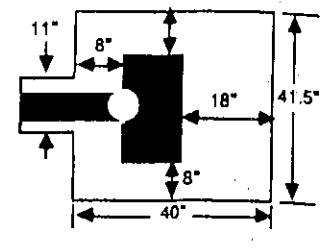


Figure 12B

During laboratory testing, it was determined that the floor protector should be one layer of 3/8" non-combustible millboard or equivalent. You may decorate the millboard with a variety of ceramic tiles or bricks. All joints should be filled using only non-combustible materials.

A number of pre-manufactured floor protectors are also available. If you choose to use one of these, make sure that it has a safety listing mark on it. Never put any type of floor protection on top of carpeting.

#### Clearances

Safe distances must be maintained between the stove and combustible materials in its vicinity. A combustible is anything that can burn; and in the case of stove installations, these combustibles may not be visible. If you are not sure of the combustible nature of any material in the vicinity of your planned stove installation, you should check with your local fire officials. Remember that "fire resistant" materials are considered combustible; they are difficult to ignite, but they will burn.

If you have recently purchased a home which has a stove hearth in it that you plan to use, it is extremely important that the entire system is examined for safety. Many older homes have faulty chimneys, or previous owners may have covered combustible walls or studs with brick veneers. Heat is easily conducted through brick and could ignite unseen combustibles behind it.

#### Standard Installations

The Jotul 8TDC can be top exited or rear exited. Figure 13 gives the clearances for a top exited stove and figure 14 gives the clearances for a rear exited stove.

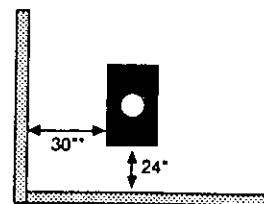


Figure 13

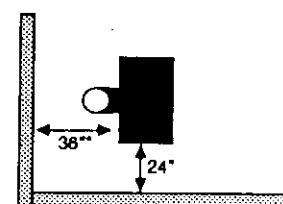


Figure 14

\* The clearances behind the stove can be reduced to 20.5 inches using the Jotul rear heat shield (part #950072)