JØTUL

Models 3, 3A, & 3C

Installation & Operating Instructions

JØTUL®

Tested & Listed by: OMNI™, Beaverton, Oregon
Tested to UL 737, UL 1482. Test date May 6, 1986. Report no. SS080-1. I.C.B.O. No. TL 130

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.

Aksjeselskapet Jøtul, Postboks 6206-ET. Oslo 6, Norway

1. General Information

Jøtul has been making cast iron wood and coal stoves since 1853 and is the world's largest manufacturer of solid fuel burning appliances. Your new Jøtul stove has inherited the benefits learned from over 125 years of producing stoves and is designed to give you many years of satisfaction.

The Jøtul Fireplace stove #3 is available in three models: the #3, #3a and #3c. Models 3a and 3c are modified versions of the basic #3 and were developed as alternative ways to meet clean burning standards now in effect in various parts of the U.S.

Model 3a achieves its clean burning characteristics by employing standard combustion technology. Very simply put, a hot fire burns clean, so we've altered the draft wheel to permit only a hot fire and increased the flue outlet size to 7 inches from 6 inches. The effect of the 7 inch outlet is to slow down the rate at which gases leave the stove, allowing more of them to burn.

Model 3c gets its clean burning job done by employing the same catalytic technologies which are used to reduce emissions from automobiles.

The catalyst enables smoke and gases to burn at less than half the temperature required without the aid of the catalyst. This means that the 3c will burn cleanly over a wide range of heat outputs. The catalyst is housed in a 7-inch flue outlet and this is the only distinction between the 3 and 3c.

Of course, a cool, smoldering fire should be avoided in any stove and the standard model 3, when operated properly, is a very efficient, clean burning stove.

Optional Equipment

The following optional equipment is available for the Jøtul Fireplace stove.

Description:

1. Short legs (101952) – will reduce the stove height by 2¼"
2. Fireplace shield (350073) – to protect combustible mantels and trim
3. Reduced clearance shield (05 950071) – allows closer installation to unprotected rear walls
4. Catalyst (5000) – basic model 3 stoves can be converted to model 3c's at any time by replacing the flue outlet with the catalyst and housing

For installation and assembly, please follow the instructions supplied with the optional equipment packages.

To obtain the maximum benefits from your new stove and keep your family safe, as well as warm,

READ THIS ENTIRE MANUAL CAREFULLY BEFORE INSTALLING YOUR STOVE. FAILURE TO DO SO MAY RESULT IN DAMAGE TO PERSONS AND PROPERTY.

When installing, operating, and maintaining your Jøtul Fireplace Stove, follow the guidelines given in these instructions. Save these instructions and keep them so that they are always available to anyone using the stove.

Several areas of the country 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 Jøtul Fireplace Stove

Any use of fire in the house represents a certain danger and with intense overfiring, temperatures on the surface of the Jøtul Fireplace Stove can exceed 1000°F (536°C).

Please comply with the following warnings.

- Never overfire the stove. If any part of it glows, you are overfiring, and serious damage to the stove or a chimney fire could result. Immediately close down the draft control if you notice this condition.
- Never modify the Jøtul Fireplace Stove in any way which is not in accordance with the manufacturer's specifications.
- Teach children that the stove is hot and should not be touched.
- Never burn trash of any kind in the stove.
- Do not dry clothes over the stove; they could ignite.
- Keep loose flammable materials at least 48 inches away from the stove.
- Never use the stove if there are combustible gases in the house. A few examples of combustible gases are the fumes from certain cleaning fluids, adhesives, and paints.
- Always wear protective gloves when adding fuel to the fire.
- Use only seasoned wood in your Jøtul Fireplace Stove. Never use synthetic logs or fireplace coal.
- Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this heater. Keep all such liquids far away from the heater while it is in use.
- Never operate the Jøtul Fireplace Stove with cracked or broken glass. Replace damaged glass with ceramic glass 4mm in thickness (available from your dealer).
- 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 inches of the stove.
- This stove is not approved for use in mobile homes.

3. Installation

For your safety, follow these installation instructions.
Consult local building or fire officials about restrictions and installation inspection in your area. If the stove is not properly installed, a house fire may result. Refer to the chimney and chimney connector manufacturer's instructions and local building codes for installation through combustible walls or ceilings.

Assembling the Fireplace Stove

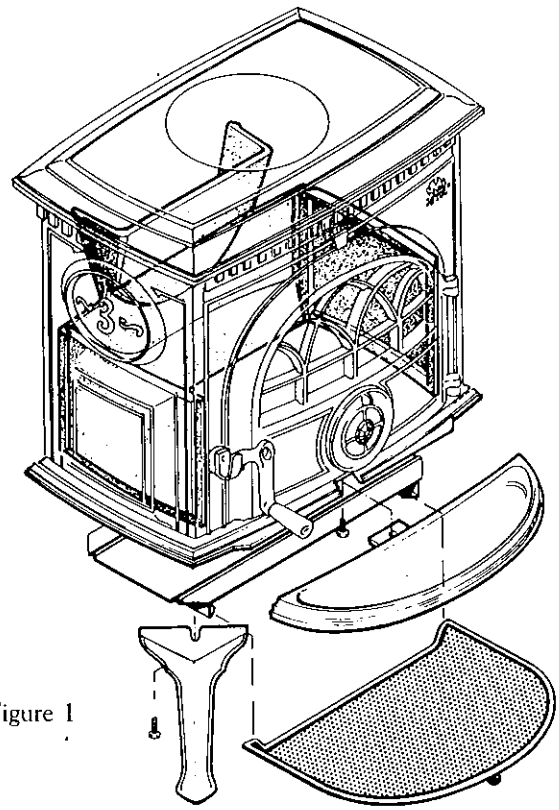

Figure 1

In order to prevent shipping damage, several parts of your stove have been removed and packed separately.
These parts are:

All models

4 legs
1 bottom heat shield
1 ash/log retainer
1 ash lip
1 flue outlet collar
1 wooden door handle
1 8x80mm cheesehead bolt
1 insulated washer
4 square washers
1 8mm nut and washer
4 6x25mm hex bolts
6 6x16mm hex bolts
2 6x16mm self tapping bolts

Model 3c only

catalyst & housing
probe thermometer
wooden handle

Assembly

1) Lift the top of the stove off and gently lay the stove on its back.
2) Attach the bottom heat shield and legs using the 4 6x25mm hex bolts and square washers. The heat shield is sandwiched between the legs and the bottom of the stove. The two channels on the heat shield which hold the door screen should face the floor. Do not over tighten the leg bolts.
3) Stand the stove up and bolt on the ash lip with a 6x16mm hex bolt.
4) Flue outlet. All model 3 stoves are delivered with the top outlet covered. To top vent the stove, remove the outlet cover and traverse bar and replace them in the rear outlet.
5) Attach the flue outlet collar in the desired location with the three 6x16mm bolts. It will be easier to attach the rear outlet if you lift out the side and rear burn plates.
On model 3c the catalyst housing serves as the flue outlet. When mounting the catalyst be sure to orient the hole for the probe thermometer so that it will be visible.
6) The ash/log retainer drops into place and rests in a shallow groove in the bottom burn plate.
7) Put on the wooden door handle. Put the 8x80mm bolt through the metal washer, then through the large end of the handle. The insulating washer goes between the wooden handle and the door latch. The 8mm nut goes on the end.

Location

The Jøtul Fireplace Stove can be installed in a variety of locations in your home, but combustible materials in the vicinity of the stove must be protected. Study Figure 2 to determine the floor and wall protection necessary for your planned installation.
Figure 2, clearances to combustibles, is divided into two sections, floor protection and wall protection.
To see how to use the clearance diagram, let's suppose you wish to install the stove with the pipe exiting the rear of the stove and running straight to the wall behind the stove.
Find the flue outlet figure which represents this type of installation. In this case it would be Figure T1.
The size of the floor protection needed is read directly under T1 from the top of the chart. The protection under the stove is 36 inches wide (A) by 37 inches deep (B), and under the pipe running to the wall is 27 inches deep (C) by 10 inches wide (D). These are the minimum dimensions required and most people will make the pipe protection as wide as the stove protection.
The required clearances to combustible walls is read under flue outlet T1. The stove must be positioned a minimum of 34 inches (A) from the rear wall and 24 inches (B) from the side wall.
The required clearances to combustibles can be reduced with the aid of additional protection. Jøtul heat shields, listed air insulated chimney connectors and U.L. listed wall protectors are commonly used to reduce clearances.
The asterisk by A, 34" under T1 indicates that our rear clearance can be dropped from 34" to 13" if you use listed air insulated pipe and Jøtul heat shield (part 05 950071).
The asterick by B, 24" under T1 indicates that our side wall clearance can be dropped from 24" to 13" if you use listed wall protection. A number of U.L. listed wall protectors are commercially available. If you wish to make your own wall protector, follow guidelines given in the National Fire Protection Association's code 211, Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances 1984, Table 8-7 (b). Your dealer or local official can help you obtain this information.

The Chimney and Its Connection

The chimney to serve the Jøtul Fireplace Stove must be either a tile lined masonry chimney or a listed building heating appliance chimney. The chimney for model 3 must be a minimum 6 inch diameter and 7 inch diameter for models 3A and 3C. DO NOT CONNECT THE JØTUL

FIREPLACE STOVE TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

An existing masonry chimney should be inspected and, if necessary, repaired by a competent mason before connecting the stove.

The chimney connector, or pipe, which is used to connect the stove to the chimney, should be 24 gauge blue steel, its equivalent or better. Use 6" diameter pipe for model 3 and 7" for models 3A and 3C. For reduced clearance installations use UL listed double wall air insulated pipe.

Each joint of the pipe should be sealed with furnace cement and secured with three sheet metal screws per joint. The crimped or smaller end of the pipe should always run towards the stove. Horizontal pipe runs should have 1" of rise per foot of run.

When connecting the chimney connector to a thimble for a masonry chimney, the pipe should extend into the thimble so that the end of the pipe is flush with the inner end of the thimble.

Do not pass the chimney connector through any floor, wall or ceiling, nor through a fire wall partition. Other safe methods of passing a connector through a wall are available. If you have any doubts about the safety or type of chimney connection, consult either your dealer, local building inspector, or fire official.

4. Operation

BEFORE BUILDING A FIRE IN YOUR NEW JØTUL FIREPLACE STOVE, PLEASE READ THE FOLLOWING SECTION CAREFULLY.

USE ONLY SEASONED WOOD AS FUEL. AVOID USING TREATED, PAINTED, OR ROTTEN WOOD. NEVER USE GASOLINE, GASOLINE TYPE LANTERN FUEL, KEROSENE, CHARCOAL LIGHTER FLUID, OR SIMILAR LIQUIDS TO START OR "FRESHEN UP" A FIRE IN THIS HEATER. KEEP ALL SUCH LIQUIDS FAR AWAY FROM THE HEATER WHILE IT IS IN USE.

Wood Storage

When storing wood outside, it should be covered from the elements and stored off the ground. Make certain that the woodpile has good air circulation through it in order to promote drying to aid in the seasoning process.

To obtain the most benefit from the wood you burn, use only seasoned wood which has been cut and split for at least one year. Burning unseasoned or wet wood causes rapid development of creosote, while reducing the heat value of the wood being burned.

Creosote and Soot Formation and the Need for Removal

When wood is burned slowly, it produces tar and other organic vapors which combine with expelled moisture to form creosote. These creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. The creosote that accumulates in the flue is highly flammable and is the fuel of chimney fires. To prevent a chimney fire, the creosote needs to be removed by sweeping the chimney and flue connector. The frequency of sweeping will depend on how you operate your stove but it is important to inspect the flue after every two weeks of use. An accumulation of ¼" or more on the sides of the flue or connector is considered hazardous and should be removed.

In the event that creosote in your chimney or flue connector ignites, the resulting fire is often accompanied by a roaring noise and a crackling sound as flakes of burned creosote break loose. If you suspect you are having a chimney fire, immediately close the draft regulator and make sure the door is closed. Call the fire department.

Trying to extinguish the fire in the stove will not help; in fact, it can make matters worse by allowing oxygen through the door, which then supports the fire in the chimney. When the roaring and crackling has stopped, you should resist the temptation to open the door and look at the fire. The fire may have suffocated but could rekindle when you open the door. After a chimney fire, do not use your stove until the chimney and the flue connector have been cleaned and inspected to insure that no damage has been sustained.

Figure 2

- Contact local building or fire officials about restrictions and installation inspection in your area.
- Install and use in accordance with the manufacturer's installation and operating instructions.
- RESIDENTIAL CLEARANCES: STANDARD, REDUCED & ALCOVE. Install stove minimum (A or C) inches from backwall, and (B or C) from sidewall. Chimney connector minimum (E) inches from wall and (D) inches from ceiling.
- CHIMNEY & CONNECTOR STANDARD INSTALLATION: Use 6 inch diameter min. 24 gauge black steel chimney connector with Listed Residential Type and Building Heating Appliance of masonry residential type chimney for Model 3, use 7 inch diameter for Model 3A and 3C.
- CHIMNEY & CONNECTOR REDUCED & ALCOVE INSTALLATIONS: Use Listed air insulated chimney connector with Listed Residential Type and Building Heating Appliance or masonry residential type chimney. Use 6 inch diameter minimum for Model 3, use 7 inch diameter for Model 3A and 3C. Heat Shield Kit (Part 05 950071) required for all reduced and Alcove installations. Alcove installations also require listed side wall protection. Alcove size: Minimum height 7 feet, width 48 inches, maximum depth 4 feet. For Alcove installations use Figure T5 and clearances.
- CAUTION: Special methods are required when passing chimney through a wall or ceiling, refer to local building codes. DO NOT pass chimney connector through a combustible surface. DO NOT connect this unit to a chimney flue serving another unit.
- FIREPLACE STOVE 3C MODEL: Catalytic install only with flue outlet figures & clearances: T1, T3, T4.
- Install fireplace stove in front of a masonry fireplace minimum (A) 22 inches from mantle, (B) 24 inches from sidewall, (C) 16 inches from side combustible trim, (D) 11 inches from top combustible trim. For fireplace hearth installation use Shield Model: 35 00 73 and Leg Model: 35 00 74.
- NOTE: MODEL 3C: Switch catalyst to by-pass position before opening fuel door.

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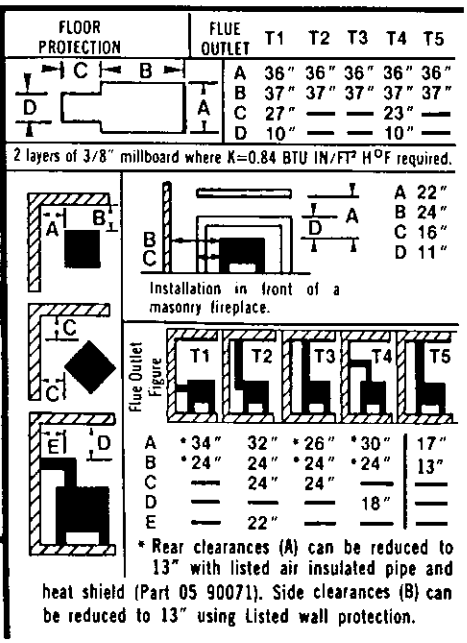
Tested & Listed by: OMNI Beaverton, Oregon USA

I.C.B.O. No. TL 130
DO NOT REMOVE THIS LABEL



Breaking in Your Stove

A cast iron stove should be "broken in" much in the same way a new car with a cast iron engine is: gradually. It is mandatory that five consecutive small fires be built in the stove prior to operating the stove continuously. Each fire should be a little larger than the previous one and the last fire should be a full sized load. Allow the stove to cool completely between fires. Breaking in your stove this way works much like an athlete limbering up before competing.

Building a Fire

Prior to building your first fire, it is a good idea to burn just one or two sheets of newspaper to make sure all of your connections are good and the chimney is drafting properly.

To build a fire, place three or four crumpled sheets of newspaper on the bottom of the stove and pile a handful of kindling on top of the paper. Light the paper, open the draft regulator on the door fully and close the door. When the kindling is burning well, add a few pieces of medium to normal size wood. If the fire does not become well established, you may not have used enough kindling, added too much oversized wood or used green wood. When the fire is burning well and in no danger of dying out, you can vary the draft to regulate the rate of burn and heat output.

The stove is ready to be refueled when the logs have been reduced to glowing embers. A few minutes before refueling open the draft regulator fully. This allows smoke and gases to clear the stove and intensifies the heat in your coals so that your new fuel will ignite rapidly.

When you open the door, just crack it, and pause a few seconds before opening it the rest of the way. Do this whenever you open the door, whether you are refueling or just checking on the fire. Under high temperature and low oxygen conditions an accumulation of unburned gases may exist inside the stove, and opening the door fully could allow fresh oxygen in, igniting these gases with explosive force. Poke the embers into an even bed, add the new fuel and close the door. Leave the draft regulator fully open until the new fuel is burning well. By waiting until the new fuel is burning well before closing down the draft, you can reduce the rate of creosote formation in your flue.

The first few times you fire your stove you may notice it "sweating." This is normal. Moisture forming on the outside of the stove should immediately be wiped off to prevent it from staining the stove.

Special Operating Instructions for Model 3C

Model 3C is equipped with a catalyst coated ceramic honeycomb and a probe thermometer. See Figure 3. Normally gases liberated from the combustion of wood require a temperature of 1,200°F to ignite. The catalyst on the ceramic honeycomb will allow these same gases to start burning at a temperature of 500 to 550°F.

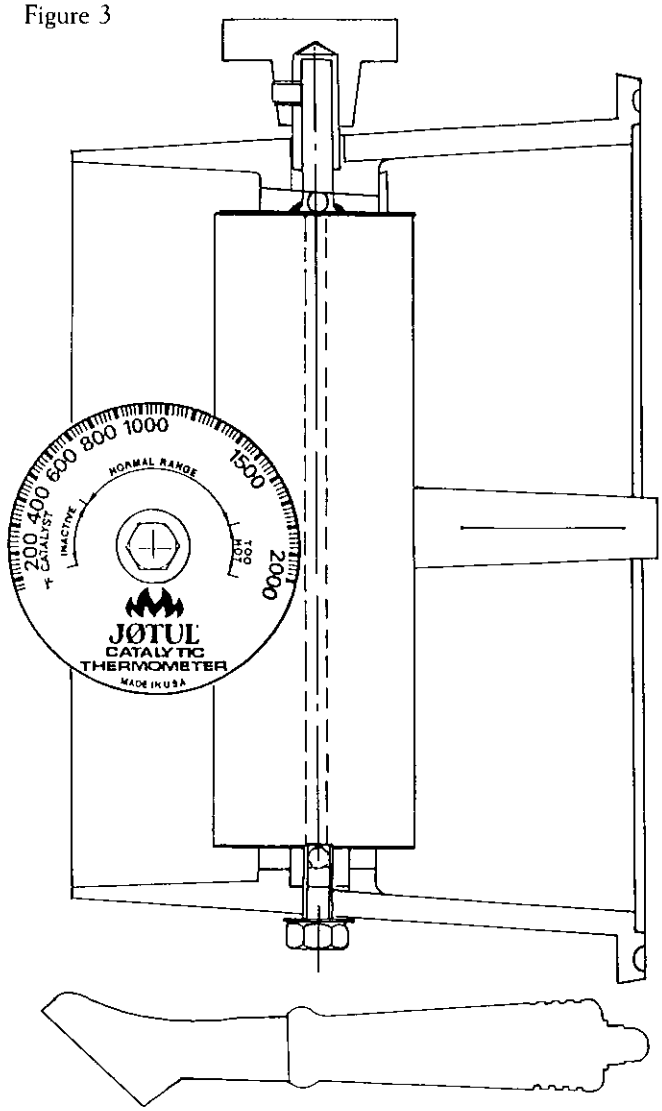
To build a fire in model 3C follow the same procedure as outlined for models 3 and 3A except for the following.

Before building a fire rotate the ceramic honeycomb with the removable wooden handle to the bypass position. The arrow on the bypass handle is on the same plane as the honeycomb so that when the arrow is parallel to the stovepipe, the honeycomb is bypassed. Use the removable handle to rotate the catalyst to the bypass position whenever you open the door of the stove.

Since the catalyst does not activate until it reaches the 500°F range you do not want to swing the catalyst into the active position until your probe thermometer indicates you have reached these temperatures.

Observe the probe thermometer for several minutes after you have closed the bypass. If the temperature begins to fall below 500°F, the catalyst was not sufficiently preheated before closing the bypass. Generally catalytic "light off" is accompanied with a sharp rise in temperature. For the first few hours of the burn cycle temperatures should average around 700°F on the probe thermometer. Brief periods of high temperatures are not harmful to the catalyst or the ceramic honeycomb but you should avoid operating the catalyst above 1,800°F. If your stove is operating at these temperatures, decrease the draft and, if necessary, open the bypass. Temperatures above 1,800°F can reduce the life of your catalyst and are a result of too much "fuel" reaching the catalyst. Finely split wood, pitchy pine or tightly packed loads can overwork the catalyst. It is best to use wood that is 4 to 7 inches in diameter and load the stove frequently with medium sized loads.

Figure 3



Adding Fuel

At the end of the burn cycle there will be very little fuel reaching the catalyst and it could go out before adding new fuel. The introduction of new fuel can also cool off the stove enough to deactivate the catalytic combustion.

If the catalyst goes out (temperatures below 600°F) repeat the procedure used in starting a fire to get it going again.

Disposal of Ashes

After several days of burning it will be necessary to remove some ashes from the stove. Ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground, well away from all combustible materials, outside of any building, pending final disposal. If the ashes are disposed of by burial in the soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

Do not remove all of the ashes from the stove. The stove will perform better if you maintain a one inch layer of ashes in the bottom.

5. Maintenance

At least once a year you should perform a routine maintenance check. A good time to do this is when you are cleaning the chimney and connector. Of course you should clean the chimney and connector whenever accumulations of soot and creosote reach ¼" thick, which may be several times a year, depending on how the stove is operated.

Maintenance Check

1) Inspect the entire stove and replace any cracked parts.
2) Inspect all joints for leaks or missing furnace cement. Disassemble, clean, and re-cement.
3) Check door and top gasket. Replace worn gaskets with ⅜" braided fiberglass gasket. Loose gaskets can be re-cemented.

At the end of the heating season remove all of the ashes from the stove. Take out the burn plates and paint or lightly oil the inside of the stove and burn plates to prevent rust.