Installation and operating instruction for Jøtul boxstove No. 201

This installation and operation instruction is divided in 5 parts:

1. General information
2. Hazards connected to the use of closed room heaters
3. Installation
4. Operation of the room heater
5. Sweeping and maintenance

THIS SYMBOL ON THE NAMEPLATE OF THE PRODUCT MEANS IT IS LISTED BY UNDERWRITERS LABORATORIES INC. ONLY THOSE PRODUCTS BEARING THIS LISTING MARK ARE CONSIDERED AS COVERED BY UL’S LISTING AND FOLLOW-UP SERVICE.

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.

JØTUL®
OF NORWAY

Aksjeselskapet Jøtul
Postboks 6206 - E. Oslo 6
Norway
1. GENERAL INFORMATION

1.1. Technology.
Jatul Boxstove no. 201 is based on a new combustion technology developed by Jatul.
The combustion takes place in two combustion chambers, one primary and one secondary chamber. See Fig. 1.
The usual wood combustion takes place in the primary chamber. The resulting fumes that otherwise would have gone up the chimney are now carried to the secondary chamber, where they are mixed with preheated air.
The supply of oxygen and the high temperature will thus induce a combustion of the gas (secondary combustion).

1.2. Stove No 201 is a cast iron product developed for wood as fuel. Wood of a length up to approx. 30 cm can be used and the stove can hold a quantity of wood of approx. 4 kg.

1.3. When installing, operating and maintaining this heater, please follow the guidelines given in these instructions. Save the instruction so it is always available for everybody using the heater.

CONSTRUCTION

2. HAZARDS CONNECTED TO THE USE OF CLOSED ROOM HEATERS

2.1. Any use of fire, also in connection with closed room heaters represent a certain danger.

2.2. With intense firing, the temperature of the cast iron can exceed 600°C (932°F). The following factors must always be considered:
a. The heater should not be installed in parts of the room where there is traffic.
b. Loose inflammable material must be kept in safe distance from the heater, i.e. minimum 90 cm (36 inches).
c. Children must be taught that the heater is hot and must not be touched.
d. Clothes must not be dried over the heater. They can fall down and be ignited.
e. The heater must be installed in accordance with the local regulations, and according to the instructions given by Jatul Inc.
f. The heater must be used and maintained in accor-

2.3. Never use the heater if there are combustible gases in the room.

2.4. Poisonous gases can come out into the room if for example the ventilation system creates a low pressure in the room where the heater is placed.

2.5. Make sure that sparks and embers don't get out of the heater when the door is opened.

2.6. Be aware that even if the ashes look cold, there might still be some burning gingers left. Avoid placing the ashes close to combustible materials before you are positive that all burning gingers are out.

2.7. Do not use the heater with an open door. The heater can then be overheated.

2.8. Do not use grates or any other means of raising the wood fuel from the floor of the fire chamber.

2.9. Creosote — Formation and Need for Removal:
When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vaporizes condense in the relatively cool chimney flue of a slowburning fire. As a result, creosote residue accumulates on the flue lining. When ignited this creosote makes an extremely hot fire. The chimney connector and chimney should be inspected at least twice monthly during the heating season to determine if a creosote buildup has occurred.
If creosote has accumulated it should be removed to reduce the risk of a chimney fire. Experienced chimney servicing personnel should be consulted.
This stove is designed to give a minimum of creosote buildup.

2.10. Utilize wood as the only fuel, and never liquid fuels. Liquid fuel utilized in a heater for solid fuel can result in an explosion and fire.
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 well away from the heater while it is in use.
Never use or store flammable liquids, especially gasoline, in the vicinity of the heater. FOR YOUR SAFETY. Follow these instructions. If this stove is not properly installed, a house fire may result.

3. INSTALLATION

3.1. FOR YOUR SAFETY. Follow these installation directions. If this stove is not properly installed a house fire may result.

Check and execute each step before you proceed.

3.1. Check the local rules.
All installations of Jatul's boxstove no 201 must be according to the local regulations and as stated in these instructions. Consult local building code authorities for specific requirements concerning installation of the product.
For further information on using your heater safely, obtain a copy of the National Protection Association publication «Using coal and wood stoves safely», NFPA No HS-10-1978.
The address of the NFPA is:
Battery-march Park,
Quincy, Ma. 02269.

3.2. Inspect your chimney.
The heater can be connected to masonry chimneys for residential type appliances, or an Underwriters Laboratories Inc. Listed Residential Type and Building Heating Appliance Chimney 6 in diameter. Single wall me-
JÔTUL® ROOM HEATER NO. 201
UL 1482 - NBRK - RPT 12 / 15 / 81

A. For Use With Solid Wood Fuels Only.
B. Install and use only in accordance with the manufacturer's installation and operating instructions.
C. Inspect and clean chimney frequently. Under certain conditions of use, creosote build-up may occur rapidly.
D. Do Not Overfire. If Heater Or Chimney Connector Glows, You Are Overfiring.
F. Do Not Connect This Unit To A Chimney Flue Serving Another Appliance.
G. Min. 24 gauge steel chimney connector should be used.
H. Min. 6 inch square masonry or 6 inch dia. residential and building heating appliance chimney.
I. Contact Local Building Or Fire Officials About Restrictions And Installation Inspection In Your Area.

<table>
<thead>
<tr>
<th>FLOOR PROTECTION:</th>
<th>FLUE OUTLET Number of layers *</th>
<th>TOP</th>
<th>REAR</th>
<th>SIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required dimensions:</td>
<td>2                2      4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under room heater and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- in front of unit</td>
<td>18 in. 18 in. 18 in.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- side, back of unit</td>
<td>8 in. 8 in. 8 in.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under chimney connector and</td>
<td>2 in. 2 in. 2 in.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- each side of connector</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Layers of 3/8 inch millboard where $K=0.84$ Btu-in/ft$^2$·h·°F.

CLEARANCES:

FIG. 2
of a square masonry chimney should be minimum 6 by 6 inch. For a circular listed insulated chimney a diameter of 6 inch is recommended. The minimum height of the chimney should be in accordance with the chimney manufacturers instruction. Do not connect this unit to a chimney flue serving another appliance.

3.3. Determine where you want to install the heater. The heater can be installed in different ways, but the installation must be in accordance with these instructions. Fig. 2 shows the listed installations and the clearances that can be used.

3.4. Make a floor protector. Top and rear flue outlets: The heater shall be placed on a floor protector not less than two layers of 3/8 inch millboard or equivalent, or provided by the use of UL Listed floor protectors. Side flue outlets: The heater shall be placed on a floor protector not less than four layers of 3/8 inch millboard or equivalent, or provided by the use of UL Listed floor protectors. Millboard is defined as a non combustible material having a thermal conductivity of K<0.84 BTU . in/ft².h.°F. The floor protector shall extend at least 18 inches in front, and at least 8 inches to each side of and beyond the back of the heater. See Fig. 2. Where the chimney connector extends horizontally, the floor protector shall cover the area beneath the connector and 2 in. to each side. If possible, the floor protector should cover the floor in this direction just up to the wall. The floor protector may be placed on the sub or finish flooring and shall be readily distinguishable from the surrounding floor.

3.5. Installation of the stove. Make sure that the insulating fireproof stones, grate and ashpan are in right place. Place your heater on the floor protector according to the clearances given in the previous section. The clearances to combustible walls may be reduced by using UL-Listed Wall Shields. Refer to the wallshield manufacturers instructions for details.

3.6. Install the chimney connector. With the heater in place you can now determine the path of the chimney connector. The connector shall be used to connect the heater to the chimney. The connector shall be made of noncombustible corrosion resistant material such as steel or refractory masonry. If a steel connector is to be used, it should be 24 gauge or thicker. A connector shall be as short and straight as possible. A 6" chimney connector should be used. The heater is delivered with a 5"-6" adapter which must be attached to the smoke outlet. The adapter is secured to the smoke outlet by two 6 mm screws which are delivered with the heater. A connector to a masonry chimney shall extend through the wall to the inner face or liner, but not beyond, and shall be firmly cemented to masonry. A thimble must be used to facilitate removal of the chimney connector for cleaning, in which case the thimble shall be permanently cemented in place with high-temperature cement. A chimney connector shall not pass through any floor or ceiling, nor through a fire wall or fire partition.

3.7. Before building a fire. With the chimney connector properly secured to the smoke outlet, your Jotul heater No 201 is ready for use. Please read the following section carefully.

4. OPERATION OF THE ROOM HEATER

4.1. Firing a cold stove. Put some newspaper and some splinters on the grate. Pour in with dry fine splitted wood from the back wall. Turn the primary air valve to maximum wood. When the wood is burning, close the door so that the closing hooks come between the door and the door frames, and provide a split above the door. Wait appr. 5—10 minutes (do not put in more wood supply). Close the door (press the handle down and the secondary air valve will get to max. opening). Look after the secondary combustion through the «window» for appr. 2 minutes. If the flames in the secondary chamber die out within 2 minutes, open the door. Keep the door open till the combustion increases. Repeat the closing as mentioned above.

4.2. After some time when the secondary combustion comes to an end, appr. 30 minutes, the wood has turned into charcoal. We are still in the starting phase of the firing and to increase the temperature even more in the combustion zone, the door has to be opened and the stove must be supplied with more wood. Close the door (press the handle down so that the secondary air valve will get to max. opening). Look after the secondary combustion through the «window» for appr. 2 minutes. If the flames in the secondary chamber die out within 2 minutes, open the door. Keep the door open until the combustion increases, repeat the closing as mentioned above.

4.3. After closing the door and after the secondary combustion has lasted for appr. 5 minutes, the combustion can be regulated down by reducing the primary air opening. Do not reduce it too much in case it dies out in the secondary chamber. (The min. opening is dependant on the local conditions).

4.4. When the secondary combustion stops (in appr. 1 hour) the wood has turned into charcoal. The starting phase of the firing is now over, and the combustion continues without any supply of wood.
4.5. We have now a pure charcoal combustion requiring less secondary air supply. Therefore lift the handle from position «3» to «2». See fig. 3. A pin on the axle of the handle lets the secondary air valve down to a min. opening. By doing this reduction of the secondary air supply during the charcoal stage, the wood's energy content can be utilized by another 3—5%.

4.6. When only the embers are left, supply with the wanted quantity of wood. To prevent smoke coming out into the room, regulate the primary air valve to a max. opening before opening the door. Do not forget to push the embers backwards. Close the door (press the handle down so that the secondary air valve gets to a max. opening). Look after the secondary combustion through the «window» for appr. 2 minutes. If the flames die out in the secondary chamber within 2 minutes, open the door. Keep the door open until the combustion increases. Repeat the closing as mentioned above.

4.7. For further firing — see point 4.3 and then you have got a continuous process.

4.8. In case you do not wish to continue the firing, the fire can be put out, either by letting the embers die out as normal or by closing the primary air valve.

4.9. Enamelled heaters must not be fired to the extent that they assume a red glow. The enamel may then be damaged.

4.10. During the first few times you use a new heater, the heater may become somewhat damp. In order to prevent this condensate from running down the face of the heater, open the door slightly during the first firing. As soon as the heater is warm, this condensate will evaporate and the door may be closed. On enamelled heaters, this condensate should be wiped off immediately as it may permanently stain or pit the surface. FOR YOUR SAFETY. Follow these installation instructions. If this stove is not properly installed, a house fire may result.

SWEEPING AND MAINTENANCE

5.1. When wood burns, soot and creosote may develop and can, together with other incombustible particles, settle in the chimney and the chimney connector. If this deposit increases it will be necessary to have it removed. This ought to be done by sweeping the chimney and chimney connector regularly. The chimney and the chimney connector should be inspected at least twice a month during the heating season to determine if a creosote build-up has occurred and cleaned if necessary. This stove is, however, designed to give a minimum of creosote buildup.

If the chimney and the chimney connector is not swept regularly, a chimney fire may develop. If a fire should erupt, the chimney should be inspected by professionals before it is taken into use again.

FOR YOUR SAFETY. Follow these installation instructions. If this stove is not properly installed, a house fire may result.

5.2. The room heater may burn continuously (day and night), even on small loads. Should pitch develop during such continuous burning, the heater should be fired intensely at regular intervals. This repeated a few days in succession will burn away possible pitch.

5.3. To give the maximum amount of heat, the heater and the chimney connector should be swept regularly. When sweeping the chimney connector it may be convenient to disconnect the heater. The chimney connector must be cleaned in its full length to assure a safe removal of all soot and creosote which have condensed on the inner surfaces. Be sure to install the chimney connector properly after sweeping and secure it with the screws.

5.4. The smoke outlet and the top of the secondary chamber can be swept by removing the top plate.

5.5. Disposal of ashes.
Ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

5.6. Maintenance.
Cleaning of the glass.
With rear and side flue outlets, remove the top plate. With top flue outlet, open the door, and remove the upper front cover by unscrewing the two screws. Pull the upper front cover forward, and lift it up to release the hinge bracket.
The glass is cleaned by using e.g. a rag.
The stand-up firebricks in the primary chamber are retained in position by the bottom grate. The firebricks are released by removing the grate.
We recommend that you inspect your heater whenever sweeping is performed. Check all visible surfaces for cracks. Inspect the joints for visible leaks and check the gasket in the door and on the top lid. Loose gasket may be fixed by applying some water glass (Sodium Silicate) in the slot.
If a mechanical failure is disclosed, please contact your local dealer.
is a prime requirement for this stove to operate properly. Required for this step will be much less, however, because the stove is not which
when removing, follow the same procedures as described above. The time

Step 5.

has been burned and only charcoal remains as fuel.

in the upper chamber will stop. This means that the gases that remain in the wood
After a period of time, anywhere from thirty minutes to an hour, the flame

Step 4.

is extinguished.

ition. Do not reduce to such an extent that the flames in the secondary chamber

Step 3.

a draft problem, consult your dealer.

solid fuel appliances is between 0.4 and 0.8 inches of water. If you suspect

Step 2.

open door and allow it to remain ajar slightly at the top, approximately one inch.

the grate. Ignite the paper and close door. Fully open draft regulator. Re-

Step 1.

Please read these instructions first before using your Jotul 201

operating instructions for Jotul 201

Bulletin