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**1. Wood-burning stoves from Jydepejsen A/S**

A wood-burning stove from Jydepejsen A/S is a quality Danish product. Our stoves have been providing a cheerful, cosy atmosphere and excellent savings on heating in many homes since the company was founded in 1979.

We aim to continue to produce stoves that are among the best on the market. The key factors are simple operation, optimum combustion, timeless design and environmental awareness.

Right from the word go we have created innovations that have since become the norm for quality European stoves. In many respects these pioneering ideas have helped Denmark maintain its position as Europe's leading producer of such stoves, and have played a big part in making Jydepejsen's products a brand name. In autumn 1999 the company became the first stove manufacturer in Europe to gain environmental certification under the *international ISO 14001 standard*. This means that in production and research & development we work purposefully towards reducing environmental impact. It is also important to us that our stoves are capable of achieving environment friendly combustion, which is ensured by Jydepejsen's long-standing design principles.

To realise our mission of environment friendly combustion, it is your responsibility as a consumer to use the correct fuel and operate your stove according to the instructions. All stoves purchased from Jydepejsen are accompanied by operating instructions describing the correct stoking method for the specific model.

The aim of this manual is to guide and instruct all stove owners in correct and environment friendly wood burning, and to minimise the risk of incorrect operation of the stove. It is therefore very important to read this manual carefully, as a supplement to the operating instructions for your stove model. Correct operation is also vital with regard to our applicable warranty terms.

Kind regards

*All at Jydepejsen A/S*

**2. Before installing your stove**

Before installing your new stove, you must ensure that the location complies with the applicable building code regulations. See also operating instructions for information on minimum distance for flammable materials. If the stove is to be installed up to a brick wall or other non-flammable material, there are no minimum distance requirements. However, we would recommend at least 5-7cm at the rear for cleaning access.

**3. Heat generation and distribution**

All Jydepejsen wood-burning stoves are two stoves in one. Inside is the actual stove, produced from strong steel plates, and on the outside a covering of steel, ceramic tiles or soapstone. There are two major types of heat: radiant heat and convection heat. In the airspace between the actual stove and the covering, convection heat is generated. The air is sucked in at the bottom of the firebox. The heated air then flows upwards and begins to circulate around the room, subsequently dispersing into the neighbouring rooms, providing perfect heat distribution. So the question of where to position your stove is an important one. The ideal location is fairly central, in the room where you require most heat. Leave doors open, to allow the heat to spread throughout your home.

*Unlike radiant heat, which is highly concentrated around the stove, convection heat flows upwards and spreads to neighbouring rooms.*

### **Preheated air**

In all our stoves we utilise a combustion technology involving preheated air. The air supply for the combustion process comes from an air inlet and is then conducted through ducts in the stove that become warm when the stove is in use. The advantage of this technology is that the air is already warm when it enters the firebox, so a high combustion temperature can be attained very rapidly.

### **Fresh air**

Modern, well-insulated buildings should have fresh-air vents, to admit fresh air from outside. Modern buildings are now so well insulated that the volume of air indoors can be low. A regular supply of air to the building from outside prevents negative pressure indoors.

### **Primary and secondary air supply**

Most Jydepejsen wood-burning stoves are designed with both a primary and secondary air vent. The primary air vent supplies a very direct volume of air, which only serves a purpose in the lighting phase. The primary air supply should therefore only be used when lighting the stove. The secondary air vent, however, is used for air control once the stove is lit.

Operation of the stove is made even simpler with Jydepejsen's remote control, which allows you to programme air supply and temperature conditions.

## **4. Flues and chimneys**

Jydepejsen offers an extensive and complete duct range produced from strong 2mm-thick material, and with a diameter of 150mm.

The flue can be fitted with a throttle/flue vent to adjust the flue for use in stormy weather etc. The vent cannot be closed completely, as this could cause carbon monoxide to collect in the stove. Flue vents in Jydepejsen's duct range always allow at least 20% of total air flow.

A chimney with a decent draught is a prerequisite for good combustion. So follow the instructions in the building code for small buildings and ask the advice of your dealer or chimney sweep if in doubt. It is essential to make sure that an existing or new chimney will be high enough to provide optimum draught for the stove. If the chimney draught is insufficient, it could cause smoke problems.

### **Brick chimneys**

Older brick chimneys must be approved by a builder before installing a wood-burning stove. If the aperture is significantly larger than the minimum requirement of 175 cm<sup>2</sup>, it may be necessary to put in an isolated core in the chimney to increase the draught and reduce the risk of tarry soot. Contact your dealer or chimney sweep for further advice and guidance.

### **Steel chimneys**

Approved steel chimneys in sections may be connected to all wood-burning stoves from Jydepejsen A/S. Choice of chimney can be arranged with your dealer.

## **5. Before initial lighting**

Once your stove is in place and all instructions have been observed, it is ready for lighting up. However, please take careful note of the following:

The rear section tiles should be removed before the initial lighting up. A sudden temperature change could cause the tiles to crack. The tiles are not covered by the warranty, so ensure that they are at least at room temperature before lighting up.

The baffle plate and vermiculite panels may crack under hard impact. These are not covered by the warranty, so avoid any heavy blows when placing wood in the firebox.

Avoid touching the stove when initially lighting up, as the paint is hardening at this stage. Touching the paint may cause the steel to show through - if necessary, it can be retouched using the spray can included in the Jydepejsen start pack (see below).

It is a good idea to ensure effective ventilation during the first firing, as the stove will generate smoke and an odour of paint. Do not stay close to the stove. The smoke and paint odour will dissipate after about 1 hour's operation and is not injurious to health.

*For correct lighting/burning of your stove refer to the operating instructions.*

### **Practice makes perfect**

Optimum regulation of the air vent takes a little practice. Once you have had a bit of practice with lighting the stove, you will develop a natural routine.

The stove will expand and contract during the lighting and cooling phase, possibly resulting in creaking noises. This phenomenon is completely normal for sheet-iron stoves, and should not be regarded as a fault.

*Please read the operating instructions for further guidance.*

## **6. Sensible wood burning**

When dry wood is burned in a wood-burning stove the following process occurs (over a period of approx. 1 hour):

- After lighting up the log dries out and heats up.
- After drying the temperature of the wood rises so much (to approx. 150 - 200° C) that it is converted into volatile gases and charcoal.
- As the wood is gasified a certain portion of the gases produced burn and are converted into carbon dioxide and water. During this phase the temperature rises to around 600 - 800° C, and a plentiful supply of air is required. If the air supply is accidentally reduced, the flames will be smothered, but this will not stop the conversion of the wood into gas. The unburned gas will then flow out into the chimney, causing a nuisance outdoors and build up of tarry soot.
- Next the charcoal will burn, which requires very little air supply. Finally, new wood must be laid on the glowing charcoal cinders.

## **Warning**

It is extremely important to ensure that you do not overheat your stove, as this can cause irreparable damage. This kind of damage is not covered by the warranty.

Extremely high combustion temperatures can occur when using very dry fuel, such as:

- Kiln-dried wood
- Coke
- High-energy coke
- Compressed fuel
- Pallet wood

## **7. Incorrect wood burning**

Too much air supplied to the combustion process causes an uncontrollable fire that will heat the entire stove very rapidly to an extremely high temperature. This can happen if you fire with

- an open ashpan
- open air vent in weather conditions that produce an extra-strong draught in the chimney.

Never fill the stove completely with wood. It is better to heat a stove up slowly, like a car. This will prevent cracked tiles/soapstone, damage to welds and annealing of the iron. Overfilling the firebox also substantially reduces the useful life of the vermiculite panels, as cracks are more easily caused.

Never ignite the fire at the top. Start slowly with a “normal” fire from the bottom, as any former Scout will know!

## **8. A little technical information on wood burning**

1 kilo of dry wood is made up of 20% water, with the remaining 80% divided into 60% gas and 20% charcoal.

The 60% gas only contains around half the energy content of the wood, while the 20% charcoal contains the other half.

To achieve optimum combustion, the temperature must reach 600 - 800° C \*. It is best to stoke frequently using small quantities of wood. If too much wood is laid on a layer of embers, the air supplied will not be sufficient to attain the required temperature, and the gases will disappear out through the chimney unburned. So, it is vital to supply air to the fire immediately after adding fuel, so there are flames in the firebox, and the gases burn. (See the operating instructions for your stove model for further guidance.)

### Remember that three logs will burn just as quickly as one

The quantity of firewood determines the heat emission - the more heat you require, the more wood you should add at each new stoking.

## **Types of fuel and heating values**

Stoves from Jydepejsen are designed and approved for burning wood.

Combustion involves conversion of the fuel from solid form into gases, water vapour and charcoal. The heating value is an expression of the content of combustible gases - stated in kcal/kg. All wood has roughly the same heating value per kilogram. The lighter the wood, the more that must be used to achieve the same heating value as with a heavier species of wood.

As mentioned, air-dried wood contains around 20% water, corresponding to a heating value of approx. 4 kWh/kg equivalent to approx. 3440 kcal/kg (1kW = 860 kcal.)

\* *Source: Technological Institute, Denmark*

### **Warning!**

NEVER use impregnated wood, painted wood, laminated plastic, plywood, chipboard, refuse, milk cartons, printed matter or similar. Use of such materials will invalidate your warranty, as they may emit toxic, corrosive and hazardous fumes when burned. They may also cause a build-up of the toxic gas dioxin, which is damaging to the stove and the environment.

### **Fuel**

Recently-felled wood contains 60-70% water and must therefore be seasoned before it can be used in a wood-burning stove. It must be sawn, chopped and air dried, and must contain no more than approx. 25% water before use. This equates to the wood being left in the open for approx. 1 year - covered only to protect against rain.

It is very important to always use pure, dry wood. Damp wood requires a lot of air for combustion, as extra energy in the form of heat is needed to dry it out. Heat emission is therefore minimal. It also causes sooting up of the chimney, with a risk of tarry soot and chimney fire.

## **9. Other types of fuel and heating values**

The following types of fuel are not approved by the Danish testing institute. They can be used in all wood-burning stoves from Jydepejsen A/S, but *extreme* care is required. When using these types of fuel there is a danger of the stove overheating, as they all have an extremely high heating value.

### **Wood briquettes**

The water content of wood briquettes is very low, and combustion can be almost explosive. If using wood briquettes, only use a few at a time. Economically, wood briquettes are more expensive than using wood.

### **High-energy coke/petro-coke**

Petro-coke, which is a by-product from petroleum manufacturing, has a very high heating value, and therefore the combustion must be carefully monitored. Light the fire using paper and wood until there is a good layer of embers, and then draw the embers to the door using an ash shovel, and pour the petro-coke in towards the back wall of the firebox. In other respects, use the same stoking principle as for wood burning.

Petro-coke is an excellent fuel, but it must be handled with greater care than other types of fuel due to the extremely high burning temperature.

### **Lignite briquettes**

Burning lignite briquettes is not really worthwhile as they are expensive and it is more difficult to control the combustion - as with wood briquettes. They also produce considerably more ash.

### **Coal**

Not all types of coal are suitable for wood-burning stoves. Only those types for use in the home, household coal, can be used. We would recommend filling up with no more than approx. 2kg at a time. For lighting and stoking, follow the same principles as for wood burning.

## 10. Combustion problems

Combustion problems can arise if the combustion conditions are not optimal. This can be corrected by following the advice given below.

<b>Problem</b>	<b>Explanation</b>	<b>Remedy</b>
<b>Insufficient draught</b>	<ul style="list-style-type: none"> <li>▪ The flue vent is closed.</li> <li>▪ The access hatch in the chimney is defective or missing.</li> <li>▪ The chimney is blocked by a bird's nest or similar.</li> <li>▪ The flue pipe is sooted up, or there is an accumulation of soot on top of the baffle plate.</li> <li>▪ The chimney is too small.</li> <li>▪ The baffle plate may be positioned incorrectly.</li> <li>▪ Negative pressure in the house.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Open the flue vent.</li> <li>▪ Contact your chimney sweep/stove dealer for further advice, or clean the flue pipe and firebox.</li> <li>▪ Check the fitting of the baffle plate – see the operating instructions.</li> <li>▪ In well-insulated buildings negative pressure can occur – increase the air supply to the room.</li> </ul>
<b>Too much draught</b>	<ul style="list-style-type: none"> <li>▪ The baffle plate may be positioned incorrectly.</li> <li>▪ If using kiln-dried wood, this requires less air than normal wood.</li> <li>▪ The air vent is constantly wide open.</li> <li>▪ The sealing strips on the door are worn and pressed completely flat.</li> <li>▪ The chimney is too large.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Check the fitting of the baffle plate – see the operating instructions.</li> <li>▪ Reduce the air supply.</li> <li>▪ Check the sealing strips. If these are worn, replace them as described in the operating instructions.</li> <li>▪ Contact your chimney sweep/stove dealer for further advice.</li> </ul>
<b>The glass pane is sooting up</b>	<ul style="list-style-type: none"> <li>▪ The wood is too wet.</li> <li>▪ The air vent is not sufficiently open.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Dry wood with a maximum of 20% moisture should be used.</li> <li>▪ The air vent must be opened to supply more air for combustion.</li> </ul>
<b>White glass</b>	<ul style="list-style-type: none"> <li>▪ Poor combustion (too low temperature in the stove).</li> <li>▪ Incorrect combustion (burning waste wood, painted wood, impregnated wood, laminated plastic, plywood or similar.)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Follow the instructions for correct burning as specified in this manual.</li> <li>▪ Ensure that you use pure, dry wood in your stove.</li> </ul>
<b>Smoke comes out into the room when the door is opened</b>	<ul style="list-style-type: none"> <li>▪ Pressure compensation is occurring in the firebox.</li> <li>▪ The chimney is not a suitable size for the firebox.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Open the air vent wide for about 1 min. before opening the door - avoid opening the door rapidly.</li> <li>▪ Check the height of the chimney. It may be too short for the minimum draught required from the chimney.</li> </ul>
<b>White smoke</b>	<ul style="list-style-type: none"> <li>▪ The combustion temperature is too low.</li> <li>▪ The wood is too damp and contains water vapour.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increase the air supply.</li> <li>▪ Always ensure that you use pure, dry wood in your stove.</li> </ul>
<b>Black or greyish black smoke</b>	<ul style="list-style-type: none"> <li>▪ Incomplete combustion.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increase the air supply.</li> </ul>

Lighting and burning problems are usually due to wet wood or insufficient draught. In addition to the above table, refer to sections 6, 7 and 8 of this manual and the operating instructions for your stove model.

## **11. Maintenance of wood-burning stoves**

### **Door**

Inspect the seals on the door and ashpan front, and replace if they will not close tightly. If the glass pane is dirty, clean it gently with a warm wet cloth and a little mild detergent, dipped in ash. Check that the seam between glass panel and door is completely airtight. If necessary, tighten any screws holding the inner frame in place - but not too hard, as it could crack the glass. If the glass is still loose, replace the seals.

Check the stove only when it is cold.

### **Internal maintenance**

The stove should be emptied of ash at suitable intervals. However, we would recommend leaving a layer of ash in the bottom, as this helps to insulate the firebox. A wood-burning stove should be thoroughly inspected and cleaned at least once during the course of the heating season.

### **Vermiculite**

The heat-reflecting and insulating panels in the firebox of all wood-burning stoves from Jydepejsen are made of vermiculite. This material in its basic form consists of laminated minerals, and is supplied by an ISO 9001 certified company. Vermiculite poses no health hazards. It offers various benefits in terms of heat reflection, insulation and utilisation, thereby helping to provide Jydepejsen stoves with an even higher combustion temperature, improved degassing of the wood and, consequently, greater efficiency in the stove.

If the vermiculite panels are very worn (less than half thickness), new ones should be ordered. Contact your dealer, who will be happy to assist you. You can check the operating instructions to see how the panels are fitted in your particular model.

### **Cleaning guide**

Before sweeping of your stove, the baffle plate(s) should be removed. This will allow loose soot from the chimney to drop into the firebox. Your operating instructions will show whether your stove has 1 or 2 baffle plates, and how to remove them.

The air slide should be closed to prevent soot and ash spilling into the room.

After sweeping, clean any soot and ash from the vermiculite holders in the firebox. The baffle plate(s) can then be put back in place.

### **Ash**

All wood-burning stoves from Jydepejsen have a large ashpan. Empty it before it fills completely, and do not allow the ash to collect in a cone under the shaker grate. Ash is an excellent insulator, and so the temperature of the grate can get very hot, and the grate could be damaged. Be careful to tip the ash directly into the waste bag. There may still be embers as much as 24 hours after the fire in the stove has gone out.

### **External maintenance**

Maintenance of Jydepejsen wood-burning stoves is pretty much the same as for the rest of your furniture: use a cloth and mild soapy water without solvents. After cleaning, wipe the stove with a dry cloth. The painted elements of the stove can be carefully repainted, as necessary, using Senotherm 12-1644 aerosol paint in either coke or grey, as appropriate for your particular stove. This paint can be purchased from your stove dealer.

## **12. Ceramic tiles and soapstone**

### **The finished ceramic tile**

Dimensional accuracy and colourfastness are trade requirements and demonstrate the quality level of the tile manufacturer. With natural raw materials, variations and shading may occur or small fine glazing cracks and clouding may form. Modern technology ensures that such reactions in the surface structure do not affect the quality of the finished tile. These textures in the surface are therefore not flaws, but rather a mark of the craftsmanlike individuality.

If you discover any visible cracks in your ceramic tiles on unpacking, please contact your dealer immediately.

### **Cleaning ceramic tiles**

Ceramic from Jydepejsen is simple to maintain. Wiping the tiles with a damp cloth is generally adequate. For more stubborn marks, use a little mild soapy water.

Like other natural products, ceramic tiles cannot tolerate strong acids or leaching solutions. So, avoid strong detergents. With correct and careful maintenance your ceramic tiles will radiate heat and character for many years to come.

### **Production of soapstone**

Manufacturing the large soapstone blocks is a very expensive process. The preparation involves rough and fine cutting, shaping and bevelling, regular quality control, final inspection of each soapstone tile and selection of sets of soapstone tiles.

Dimensional accuracy is required, but soapstone is a natural product, and shading will certainly occur. This is a mark of nature's own unique design.

If you discover any visible cracks in your soapstone tiles on unpacking, please contact your dealer immediately.

### **Cleaning soapstone**

Soapstone is very simple to clean. Wiping the soapstone with a damp well-squeezed cloth soaked in lukewarm water is generally sufficient. Avoid all types of detergent. Any minor scratches can be carefully removed using very fine sandpaper with a grain of 240. Should any of your soapstone tiles need repairing, please contact your dealer.

If soapstone is heated to more than 500° C, brownish blotches will appear on it. Should this occur, it is a question of the soapstone having been overheated, which is not covered by the warranty. With correct maintenance the soapstone cladding on your stove will retain its beautiful and individual character for many years to come.

## **13. Warranty**

Brand-new wood-burning stoves from Jydepejsen A/S come with a 5-year warranty against burn-through with correct operation. Any claims during the warranty period should be directed to the dealer who sold the stove.

### **The warranty does not cover:**

- Vermiculite panels
- Baffle plates
- Glass
- Sealing strip
- Cast-iron base
- Shaker grate
- Ceramic tiles
- Soapstone

If any of these break or need replacing due to wear, new parts can be ordered from your dealer. Further information on spare parts for your stove can be found in the table at the back of your operating instructions.

The warranty does not cover damage arising from misoperation or incorrect usage, such as overheating, or if the directions in the operating instructions have not been followed.

In the event of warranty repairs, the warranty does not cover dismantling, transport and reassembly of your stove. No compensation will be granted for consequential damage and damage to other articles resulting from use of the stove.

For any warranty repairs a signed and dated invoice must also be produced, showing the dealer's name.

### **Serial number**

All our stoves come with their own individual serial number on the type plate on the back of the stove. Please quote model and serial number to your dealer in connection with service tasks.