Feuer aus dem Sauerland

DROOFF KAMINÖFEN

www.drooff-kaminofen.de

INSTRUCTIONS

Installation, Operation, Function, Maintenance

EN

Dear Customer,

no doubt you have taken a good deal of trouble in deciding which wood-burning stove to buy. As you know, the most important criteria to be considered are: good quality, a design which matches your furnishings, a capacity suited to your heating requirements, clean environmentally-friendly combustion technology and, of course, a reasonable price.

Now you have decided in favour of a stove from DROOFF. We have done our best to ensure that your new stove will give you long years of pleasure. High-quality materials, expert workmanship and constant control of the production process are the best conditions for ensuring a long life-span.

You too can help to keep your stove in good working order. Read these instructions carefully and follow them closely. Incorrect operation, unsuitable fuel, overheating and lack of care and attention can all cause damage which cannot be covered by our guarantee. Pay special attention to the safety instructions given below. These will allow you to avoid potential dangers and prevent accidents or damage. For more detailed information, please refer to our data sheet entitled „Technical Information“.

We wish you years of pleasure with your new DROOFF stove, and long hours of warmth and contentment in front of a crackling fire.

Your DROOFF Team.

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1.1. Taking delivery of your stove

Please check to ensure that your wood-burning stove is in perfect condition. Pay particular attention to possible transit damage (e.g. damage to glass in the firebox door or to the firebox itself and fireclay bricks). Do not accept delivery of goods which are obviously damaged. Notify your dealer immediately of any deficiencies. Treat painted surfaces with care. Before being heated for the first time, the paint may be soft and offer little resistance to abrasion.

1.2. Correct location

- Select a location for your wood-burning stove where it can be connected without difficulty to the chimney. Before installing the stove, be sure that you have read and implemented all the regulations and legislation applicable in your locality. The operation of a wood-burning stove may have to be approved by your local authority.

- The floor must be even and horizontal. Before setting up the stove, check that the floor is capable of supporting its weight. The use of a non-inflammable floor plate will help to distribute the weight over a greater area. The exact weight of your stove including insulation and accessories can be found in the „Technical Information“ for each model.

- The floor in front of the stove must be of non-combustible non-inflammable material (e.g. tiles or floor plate). This non-inflammable area of floor must extend by at least 50 cm to the front and 30 cm to the side of the stove measured from the firebox door. In the case of a rotating stove, the safety area must be observed around the entire range of rotation.

- Ensure that there are no heat-sensitive or inflammable objects within the range of radiant heat from the glass door. For the correct distances, see „Technical Information“.

- Your stove and the connecting flue pipe must be set up at a safe distance from inflammable materials and supporting walls both at the back and at the sides. For the correct safety interval for the stove itself, refer to the data sheet „Technical Information“ and the plate attached to the stove. For the flue pipe, please consult the manufacturer.

- The safety distances between the stove and inflammable or valuable objects are measured with an insulated fire tube. Please observe the manufacturer‘s instructions for the fire tube you are using. This may necessitate an increase in the required distance.

- For your own safety, always observe the correct distances between the stove and inflammable or valuable objects e.g. wood, wooden panelling, furniture etc. as well as supporting walls of reinforced concrete. The distance between the stove and non-inflammable objects and building materials requiring no special protection may be less. However, we recommend a minimum distance of 5 cm. from the back of the stove to gain full advantage from convective heat.

- By observing the correct distances, you comply fully with the German federal regulations (FeuVO) governing the installation of open-flame heating devices.

- In spite of compliance with safety distances etc. sensitive materials (e.g. vinyl, structured or textile wallpapers etc.) in the vicinity of the stove may become discoloured. Any such discolouration is attributable only to the characteristics of such materials. DROOFF will accept no liability for such damage since all the data specified refer to the requirements of fire-protection only.

1.3. The chimney

A wood-burning stove works according to a simple physical principle – that hot gases rise. When the stove is burning, the heated gases flow upwards through the chimney, drawing fresh air for combustion into the firebox from the room or from outside the building in the case of stoves with outside-air supply. The upward draught in the chimney is the „motor“ which drives the stove. This draught is influenced by such factors as the cross section of the chimney, its height, and insulation as well as the outside temperature.

Every wood-burning stove has its own special characteristics. Changes in direction of the flue gas increase the efficiency but also create resistance. Flue-gas temperatures and quantities differ from one type of stove to another. So each stove makes its own particular demands on the chimney. It may be that a good stove and a fully functional chimney are incompatible with one another. The fact that a chimney „draws well“ is not necessarily a sign of suitable draught and temperature conditions within the chimney. The chimney and the stove have to be „attuned“ to one another. Ask a heating engineer or an expert stove dealer whether your wood-burning stove is really suitable for your chimney. If required, he can carry out the necessary calculations.

1.4. Connection to the chimney

When you are planning to connect a stove to your chimney, this must be reported to and approved by a qualified heating engineer who will carry out the necessary tests to ensure the suitability and the compatibility of your chimney with a wood-burning stove. He will also advise you on the national and European regulations and standards currently in force.

All DROOFF stoves are tested according to type 1. They all have a self-closing firebox door and are therefore suitable for use with chimneys to which several devices are connected. Your dealer or a heating engineer will be pleased to inform you concerning the suitability of your chimney for this type of use. Please note that the connection of more than one device is prohibited where the supply of air comes from interior rooms only.

The components required for connecting the stove to the chimney are not supplied with the stove. These can be purchased separately from a retailer. The diameter of the connection piece on your DROOFF stove is 150 mm. Flue pipes complying with the standard EN 1856-2 are suitable for use with our stoves. Please ensure that the flue pipe is fitted at the correct distance from inflammable materials.

Wood-burning stoves are modern technically complex devices. They will only function correctly and reliably when they are connected to chimney in full compliance with all regulations and rules of the trade.

Your wood-burning stove must be connected to the chimney by a qualified engineer!

1.5. Important information for connection to chimney

- The dimensioning of the chimney must comply with EN 13385, parts 1 and 2.
- Comply with DIN 18160 for the design and construction of flue-gas devices.
- The minimum feed pressure is 12 Pa. The maximum feed pressure is 20 Pa. For pressures greater than 20 Pa, the pressure must be restricted as required.
- All flue-pipe joints must be free of leaks.
- The flue pipe must not project into the chimney.
- The chimney connections of different devices must not be at the same level or located opposite one another. The distance between them must be at least 40 cm.
- Always ensure a safe distance between flue pipes and inflammable ceilings or panelled ceilings.

For the correct dimensioning and technical data for chimney connections please refer to the „Technical Information“ for your model.

1.6. Combustion air

A constant flow of oxygen is essential for the combustion process. All DROOFF stoves have a central connection piece through which air is supplied to the flame. This connection piece can be fitted at the back or bottom of the stove and joined to an air pipe as required.

1.7. Stove operation ***DEPENDENT*** on room air

With this type of operation, the stove receives its supply of air from the same room in which it is installed. Always ensure that enough fresh air can enter the room to avoid creating negative pressure. Ask your dealer or a heating engineer if there is enough fresh air in the room.

If, in spite of operation dependent on indoor air, the supply of air is drawn from outside, differences in temperature may cause condensation to form on the air duct and other parts of the stove in contact with air. These parts should be properly insulated to prevent condensation. The thickness of the insulation depends on the circumstances in question.

1.8. Stove operation ***INDEPENDENT*** of room air

Always ensure that the negative pressure (i.e. partial vacuum) created by kitchen extractor fans, ventilators and other such devices does not exceed 8 Pa. Have a suitable safety device installed by a heating engineer. If you have decided to operate your stove independently of indoor air, you will find a certificate and a pressure report in the stove when it is delivered. If these documents are not inside the stove, it must not be operated independently of indoor air. Contact your dealer! All fitting work for an outside-air supply must be done by a qualified engineer. We also recommend installation of a pressure gauge.

Danger! An insufficient supply of air may cause emission of toxic gases!

For an effective combustion process, the stove requires a constant supply of oxygen. Approx. 10 cubic metres of air are required to burn one kilogram of wood, and is supplied through the outside-air pipe. Through the outside-air connection piece (Ø 100 mm) the outside-air supply can be connected either to the back or the bottom of the stove. The air can also be supplied from another adequately ventilated room (but not from boiler rooms etc.).

Important:

- As with the flue pipe, the air pipe connected to the outside-air supply must be fitted by a qualified engineer.
- For the air pipe, always use a smooth pipe with a minimum diameter of 100 mm. Should you not have an LAS chimney system, the pipe supplying combustion air must have an opening and closing device near the stove with clearly marked positions for „Open“ and „Closed“. See standard EnEV.
- The number of bends and the overall length of the outside-air supply pipe have a considerable effect on its resistance. Always keep the distance short and lay the pipe directly to the outside.
- The overall length of the pipe should not exceed 5 metres and have no more than 2 bends of 90°. The heating engineer will test the air pipes. Fit a suitable wind baffle to the outside end of the pipe, and a grid to keep out dirt, leaves, insects etc.
- Differences in air temperature between the inside room and the outside of the building may cause condensation to form on the air duct and other parts of the stove in contact with air. These parts should be properly insulated to prevent condensation. The thickness of the insulation depends on the circumstances in question.

Important! The outside-air supply system must not be changed or modified in any way. Always keep the air-supply ducts open when the stove is burning. Do not use the stove unless all its components are in perfect working order. Before lighting the stove, ensure that the seals on the stove door and glass windows are intact and in place. Have the stove inspected by a qualified person before winter begins. We recommend replacement of all seals and springs once per year.

Important! Even when the stove is being operated independently of room air, a direct connection between the outside and inside of the building is created every time the firebox door is opened. In this case the controlled ventilation system should be switched off or a window opened to avoid creating negative pressure in the room, thereby causing flue gases to escape.

Stoves which are operated independently of room air comply with the Standard DIN 18897-1 FC61x.

- Fireplaces complying with this standard must be connected to a suitable chimney of their own.
- For the requirements for rooms suitable for installing a stove and characteristics of rooms which are unsuitable, please refer to the legislation in force in your country (Germany FeuVO).
- The tightness and design of the chimney and the combustion-air pipe must be constructed according to the rules of the trade and approved by a qualified heating engineer.
- In the case of stoves complying with type FC61x, the entire system must be tested for tightness after installation (e.g. smoke tube, pressure test, vacuum measurement etc.).
- If a closing flap or valve is in use in the flue-gas system, it must be kept in the „open“ position when the fire is burning and the air grid is being cleaned.
- Connection of more than one device to the chimney is prohibited.
- Should soot in the chimney catch fire, the system must be re-tested for tightness. Replacement of all seals is recommended.
- The stove has been tested for tightness by the manufacturer. The certificate is supplied with the stove.
- The door to the firebox must be kept closed when the fire is burning. It should be opened only for re-stoking with fuel.

1.9. Safety notes

- Read these operating instructions carefully before lighting the stove to obtain the information you need for its safe operation. This also applies to the model-specific „Technical Information“.
- When installing, connecting and operating your stove, observe all national and European standards as well as local rules and regulations for fireplaces and chimneys. If in doubt, consult your stove dealer or a qualified heating engineer.
- Re-check to ensure that your stove is correctly connected to your chimney.
- When the fire is burning, the surface of the stove becomes very hot. Always ensure that children, handicapped persons and animals are kept at a safe distance.
- Ensure that no inflammable materials are on or near the stove when the fire is burning.
- Keep the firebox door closed at all times, even when the stove is not in use.
- Do not overheat the stove with too much fuel. This may cause serious damage to the stove and the chimney. **Damage caused by overheating is not covered by our guarantee.**
- Never use petrol, methylated spirits or other highly inflammable non-approved substances to light the stove.
- Never place objects of inflammable material close to the glass pane in the firebox door. For safe distances, refer to the model-specific „Technical Information“.

- When operating the stove, always wear the heatproof glove provided.
- Use only fuels of the approved type in your stove. See „Technical Information“.
- Ensure that the convection openings are free of obstruction or blockage.
- Observe the safe distances to inflammable or valuable objects stated in the data sheet, „Technical Information“ and on the data plate attached to the stove.
- Ensure that the ash box is never completely full as this will prevent sufficient air from entering the stove. It may also cause the bottom grate to overheat and sustain damage.
- Push the ash box in to its full extent and always keep the ash-box door closed.
- Ensure a sufficient supply of fresh air when the fire is burning. The stove requires about 10 cubic metres of air to burn 1 kg. of wood.
- Remember, that a kitchen fume extractor in the same room or an adjacent room may create a partial vacuum thereby causing flue gases to escape from the stove. Have a window-contact switch fitted to the extractor. If in doubt, consult a qualified heating engineer on this subject.
- Do not remove hot ash from the stove. Keep ash only in safe non-inflammable containers. Do not place such containers on inflammable or heat-sensitive surfaces.

1.10. Installing facing-stone slabs

The most important rules are:

- Always work with clean hands. Gloves are preferred.
- When lifting, carrying and fitting the stone slabs, ensure adequate protection of edges and corners.
- Always lay the stone slabs on clean soft surfaces.

In order to gain a general impression of the facing, lay it on the ground in the correct arrangement for fitting beforehand. To fit the side slabs, loosen the top and bottom screws of the rear wall and push the rear wall backwards in the slot (exception: the models PICCOLINO and CREMONA / SP).

Fit the side slabs and then push the rear wall forward again until the slabs are held firmly. The re-tighten the screws. Some models have adjusting screws for the top plate. Screw all the screws in again, and only loosen the ones necessary to make sure that the top plate is lying evenly in position and that the convection gap is even in width.

2.1. Suitable fuels

Wood in the form of logs or briquets is suitable for use as fuel in all DROOFF stoves. Some models are also approved for use with lignite coal. For more information on the type of fuel to be used with your DROOFF stove, please refer to the data sheet „Technical Information“ or the plate attached to your stove.

According to German emission-control legislation, the use of the following fuels is prohibited:

- damp wood or wood which has been treated with preservative
- painted wood or wood coated with plastic material
- finely chopped wood or chippings
- bark or chipboard waste
- coal dross
- waste material
- paper or cardboard (apart from initial lighting of flame)

Remember!
A wood-burning stove is not a waste-incineration device. The burning of waste and rubbish of all types is prohibited. This is harmful both to your stove and the environment in general.

2.1.1. Wood, our fuel

Wood logs are an important raw material and source of energy for a number of reasons. Wood is a renewable energy carrier which can be found almost everywhere. Our forests are cultivated sustainably i.e. the quantity of wood growing is the same as that harvested or burnt during the same period.

Regardless of whether the wood rots in the forest or is used as fuel, it emits only the same amount of CO^2 as the tree absorbed during its lifetime. Wood is significantly cheaper than oil or natural gas, so a wood-burning stove is the most effective way of cutting rising fuel bills.

2.1.2. Logs

It is important to use only dry wood. It takes a log of wood between 1.5 and 2.5 years of seasoning in the open air to achieve a residual-moisture content of 15 - 19% which is ideal for fuel. To determine the residual-moisture content of your wood, you can use a standard moisture-measuring device obtainable from your dealer. The calorific value of the wood depends substantially on its quality and moisture content. The more water the wood contains the more energy is required for its evaporation during the combustion process. In other words, the damper the wood, the lower its calorific value.

Freshly cut wood has a high degree of moisture and therefore burns badly. Its calorific value is low and the amount of air pollution it causes is high. In addition, the tar and water vapour in the flue gas cause greater accumulations of soot in the stove and the chimney. The firebox window quickly clouds over. Different kinds of wood also have different calorific values. In relation to weight, the calorific value of soft woods such as spruce and pine is substantially higher than that of harder woods such as birch, oak or beech. However, the harder woods have a higher calorific value in relation to their volume.

The following table shows the calorific value of different types of wood:

Hard wood	kWh/kg	Soft wood	kWh/kg
Birch	4.30	Spruce	4.50
Beech	4.00	Pine	4.40
Oak	4.20	Fir	4.50

Compared to hard wood, the softer woods burn more quickly at higher temperatures. This is mainly due to their higher resin content. For domestic heating a slower burning process with more sustained and constant heat is generally desirable. However, its intended use is usually the most important factor in deciding which type of wood is preferable. Hard wood burns more slowly, thereby providing energy over a longer period of time. This may be important for heating overnight.

The faster combustion and energy release of the soft-wood types provides higher temperatures over a shorter period of time. This may be useful for heating a cold room more quickly. They are also ideal for kindling because they „get the fire going“ more quickly.

2.1.3. Preparation and storage

Wood needs time to dry. When correctly stored, it takes about 1.5 - 2.5 years for its residual moisture content to drop below 19%. It is now „air dry“. It should be split, covered over and stacked in a place with freely circulating air.

2.1.4. Wood briquets

Briquets are normally divided into hard or soft-wood briquets. They are easy to stack and have a very low moisture content. Hard-wood briquets are especially suitable for keeping a the fire glowing for a long time. However, they vary in quality, so a test is recommended before purchasing.

2.1.5. Brown-coal or lignite briquets

Brown coal briquets in standard sizes may also be used provided that they are stated in the list of approved fuels or on the metal plate of your stove. Please observe the different combustion-air settings when burning coal briquets.

2.2. Fuel quantities

Place only as much fuel in the stove as you actually need for your heating requirements. This helps to avoid unnecessary atmospheric pollution. An example of how to calculate the correct amount of fuel (beech) for your stove is given below:

Example:

Calorific value of 1 kg of beech (chopped): 4,0 kW x 0,8 (80 % efficiency) = 3,20 kW/h	**Maximum stoking quantity for a rated heating capacity of 7 kW:** 7/3,20 = 2,18 kg

In the above example, the stated quantity of wood will burn right down to red embers in about 35 - 45 minutes depending on the weather conditions, chimney draught, wood quality and position of the air-intake slide.

2.3. Rated heating capacity

The actual heating capacity of a wood-burning stove is determined by the amount of fuel actually being consumed in the firebox. The rated heating capacity on the other hand, is stated on the metal plate. The rated heating capacity is the heating capacity confirmed by the type test in accordance with EN standard and stated on the stove. In order to achieve this rated heating capacity, a defined amount of fuel has to be burned. This amount is stated in the data sheet „Technical Information“.

2.4. Heating-capacity range

Every wood-burning stove has a heating-capacity range. Your stove works perfectly at heating capacities which are lower than the rated capacity. The high quality of DROOFF stoves even permits a heating capacity which is slightly higher than the rated one. Less fuel means lower heating capacity, more fuel a correspondingly higher one. This flexibility pays off. For the heating-capacity range of your stove, refer to the model-specific „Technical Information“. Make sure that you do not overheat your stove too much or for too long as this may lead to serious damage.

Damage caused by overheating is not covered by our guarantee. For this reason, always operate your stove in line with the „Technical Information“ relating to your particular model. Burn only the amount of fuel you really need for your heating requirements. Control the heating capacity and heat emission of your stove by varying the amount of fuel, not by moving the air-intake slide.

2.5. Function of stove

- Primary air is required for heating up and for burning mineral fuels such as lignite briquets. The combustion process is supplied with primary air from below through the grate.

- Secondary air (which also keeps the firebox window clean) is required for burning long-flame type fuels such as logs or wood briquets. Secondary air is fed in from above and blows soot and gases away from the window.

- DROOFF stoves are designed and constructed in compliance with Type 1. This is a simple but effective safety system. Should you forget to close the firebox door after stoking, it closes automatically thereby preventing burning material from falling out. However, you should always ensure that the firebox door remains tightly shut.

- Depending on model, DROOFF stoves are fitted with a closing shaker grate or a fixed grate through which the primary air flows to the flame.

- Should your model have a sliding grate, this should be kept open during the heat-up phase. When the fire is burning steadily you can close it (as with the primary air) to keep the heart of the fire glowing.

- DROOFF stoves are all fitted with an ash box. The ash drops through the grate into the ash box. The amount of ash generated depends on the type of fuel and the intensity of the heat. As a rule, it should be emptied every few days.

- DROOFF stoves are fitted with a central connection for an outside-air supply. The outside-air connection is generally required when the stove is set up in a confined space. In such cases, the combustion air is fed into the firebox through the outside-air pipe. A qualified heating engineer will inform you whether you require an outside-air connection.

Note:
If your stove is not connected to an outside-air supply, remember to ensure an adequate supply of air at all times. The stove requires about 10 cubic metres of air to consume just one kilogram of wood!

2.6. First heating

Before heating the stove up for the first time, check to ensure that all accessories have been removed from the firebox and the ash box. Do not leave any articles on the stove, and ensure that the convection openings are free of obstruction. Open all the doors and windows for adequate ventilation. The reason for this is that your stove has been treated with special heat-resistant lacquer. This lacquer coat achieves its final hardness only after the stove has been heated up to its maximum rated heating capacity. Initially, this may produce an unpleasant smell which disappears as soon as the paint has been „cured".

- Open the primary and secondary-air slides fully. Leave them wide open during the first heat-up.
- Take fire lighters (NOT methylated spirits, petrol etc.), place a few small dry logs on the grate and light them.
- During the warm-up phase, the stove system is still cold, i.e. the stove, flue pipe and chimney have not yet reached the required operating temperature. During the warm-up phase, a small amount of smoke may escape when the stove is being stoked.
- After this, wait until the fire has burned down to red embers before re-stoking. Open the firebox door slowly to balance the negative pressure and prevent smoke from escaping into the room. Now close the primary-air supply.
- Do not re-stoke too soon. Avoid creating a pyramid of embers in the firebox by re-stoking with fuel too soon.
- If necessary, remove ash through the grid by shaking it or raking over it.

Important: The stove must remain in operation for several hours before the stove lacquer is fully cured and hardened.

2.7. Correct operation

- If necessary, remove ash from the firebox. Empty the ash box if it is full. Unburnt fragments of wood do not have to be removed.
- Close the ash-box door or push the ash box tightly into position.
- For normal routine use (i.e. after the lacquer has hardened) light the stove as described above.
- When the fire is burning, adjust the flow of primary and secondary air as required. This depends on the draught in your chimney and the type of fuel in use. Some useful tips for correct adjustment are given in the data sheet „Technical Information". When the fire has burned down to the embers close the primary-air slide to prevent any further air from reaching the combustion process from below. Keep the secondary-air slide open. One stoking of wood will burn right down to red embers in about 35 - 45 minutes depending on the weather conditions, chimney draught, wood quality and position of the air-intake slide.

- Wait until the fire has burned down to red embers before re-stoking. Open the firebox door slowly to balance the negative pressure and prevent smoke from escaping into the room.
- Continue stoking as described above.

Important!
Excessive restriction of the flow of air may be dangerous. Do not attempt to burn wood with a weak supply of air i.e. at a low flame. This may cause the wood to smoulder resulting in formation of condensation, tar, soot, and heavy emission of smoke and other pollutants. There may also be a risk of deflagration!

Note:
Do not regulate the heating capacity or the heat emission of the stove by moving the air slides, but by varying the amount of fuel stoked.

2.8. Operation of stove in mild weather

Problems may occur when your stove is operated at outside temperatures of 15 °C and more. Low differences in temperature cause the draught in the chimney to diminish, causing difficulty in lighting the stove, unsatisfactory combustion, excessive production of smoke and escape of smoke when the firebox door is opened. If the fire is difficult to light, try burning a few crumpled sheets of newspaper. The sudden strong heat may help to draw off the smoke in the firebox.

2.9. Environment

Heating with wood saves unnecessary pollution of the environment because wood is nothing other than stored solar energy. However much depends on the way your stove is used and on the quality of the material you burn in it. Always follow these instructions for operation.

Use only dry wood of a suitable type, wood briquets or (if specifically approved) brown-coal briquets. Do not regulate the heating capacity or the heat emission of the stove by moving the air slides, but by varying the amount of fuel stoked. To avoid overheating, place only as much fuel in the stove as you actually need.

Before lighting your stove for the first time, check all the safety elements to ensure they are working properly. Have your stove serviced regularly by a qualified person. We recommend you make a contract for regular maintenance with an approved company. Ask the engineer installing your stove to explain its function and make sure you have understood everything. Regular maintenance is the key to a long life-span for your stove.

3.1. Cleaning and general care

Clean the stove only when it is cool and there is no hot ash in the firebox. Regular care and cleaning will ensure you years of pleasure with your DROOFF stove.

3.1.1. Glass surfaces

DROOFF wood-burning stoves are designed to ensure that the current of secondary air blows smoke and gas away from the glass. If the stove is installed correctly, approved types of fuel burned and conditions in the chimney are suitable, the glass window should remain substantially clean. However, the wrong types of fuel, low-flame combustion and chimney draught which is too low or too high will cause deposits of soot to form on the glass. Glass surfaces can be best cleaned with a dry soft cloth or, if necessary, with a mild standard cleaning fluid.

Do not clean the glass windows with scrapers or abrasives of any kind. These may cause scoring or fine cracks to form which make the glass even more difficult to keep clean. Very stubborn dirt can be removed with special stove-glass cleaners which are available from your dealer.

3.1.2. Lacquered surfaces

To remove dirt or sooty marks from lacquered surfaces use only a soft dry cloth. Never use abrasives, solvents or other corrosive substances. Although the stove is lacquered, it is not rustproof. Overheating the stove may cause slight greyish staining of the outside surface. These areas can be painted over with our special heat-resistant lacquer. An unpleasant smell may be created when this fresh lacquer is heated for the first time. Make sure the room is well ventilated.

3.1.3. Firebox

Clean the firebox regularly as required and empty the ash box before it becomes too full. The amount of cleaning depends on the type of wood burned and the frequency and duration of use of the stove.

3.2. Firebox lining

The firebox of your DROOFF stove consists of stove fireclay or vermiculite depending on model. The lining often turns black during the heat-up phase but resumes its light colour later. Light coloured refractory material indicates that the temperature in the firebox is sufficiently high. Cracks may appear in the material due to thermal stressing. However these do not impair its function.

3.3. Disposal of ash

Use a small shovel or similar tool to remove ash from the firebox. Small ash containers of metal have proved their usefulness because they can be connected to a vacuum cleaner. Make sure that the ash contains no more glowing embers and has cooled down completely. Store ash in fireproof non-inflammable containers. Never place the container on an inflammable or heat-sensitive surface. Ask your dealer for information on accessories.

Danger: Never place hot ash in a rubbish bag or dustbin. Do not remove ash from the firebox with a vacuum cleaner unless the ash container is of metal.

3.4. Maintenance of seals

The seals on doors and glass panes are especially exposed to wear and tear through thermal stressing. We recommend checking these seals regularly and replacing them (or having them replaced by your dealer) at least once a year.

3.5. Firebox and connection piece

The interior of the stove and the connection piece (flue pipe) should be well cleaned with a vacuum cleaner or a brush at least once a year.

3.6. Chimney

Have your chimney swept regularly by a chimney sweep to prevent accumulations of soot from catching fire.

3.7. Cleaning stone slabs

The stone used to panel DROOFF stoves is an unsealed natural product which obtain their shape, colour and lustre only by mechanical processing. Dirt and stains on natural stone are not always a hopeless case. However, you should not wait too long before cleaning them, since they may work their way further into the stone and burn into the grain. First of all, try to determine what has caused the stain. Dust etc. which gives the stone a greyish colour can be removed with a brush, a damp cloth or with compressed air. Determine whether the dirt is purely superficial or whether it is more deeply engrained. If it is superficial, then dab it off.

Do not wipe. This will only cause it to penetrate more deeply into the stone. Deeper stains which have dried can be removed with a soft brush and lukewarm water. Before using special cleaning materials for natural stone, test them in a concealed place to make sure they are compatible with the type of stone. Remove grease and oily stains with grease-free agents such as acetone.

If the superficial staining is too stubborn, use a very fine emery paper or a pot-scouring sponge. Take great care when doing this as it may affect the colour, lustre and general appearance of the stone. The stains caused by wax can work their way deep into the stone and remain visible for a long time and cause an unpleasant smell. Dab liquid wax with an absorbent cloth. Use a wooden spatula to remove dry wax. Every time the stove is heated, wax residue will rise to the surface of the stone where it can be dabbed off. Blotting paper is useful here. If you prefer to use a heat gun to vaporise the wax, remember to heat the stove up beforehand (contrary to other procedures described) in order to prevent the stone from cracking under thermal stress.

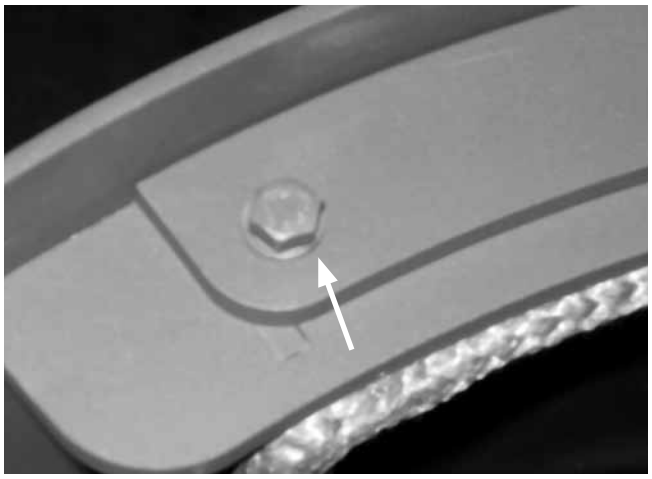
If you are unsure how to clean natural stone, contact a local stonemason for advice.

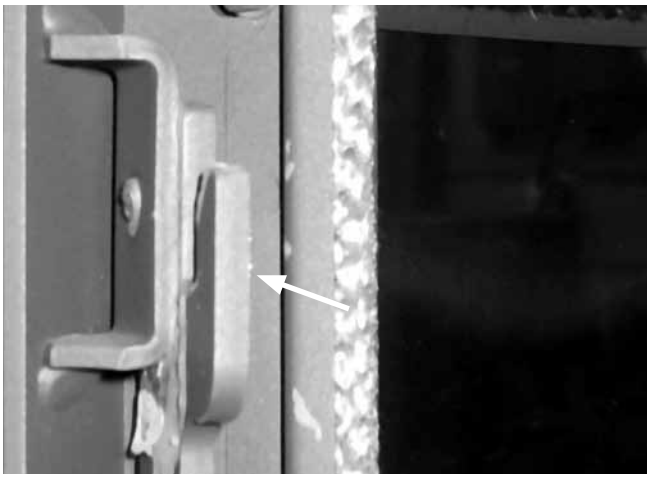
When cleaning natural stone, please note the following:

- To avoid burns, ensure that the stove has cooled down beforehand.
- Remove the stone slabs, liners and top plate to avoid accidental damage to the stove lacquer.
- Test the cleaning agent and method on an area of stone which is not seen.
- The removal of stains may necessitate cleaning all the stone slabs to avoid colour differences.
- Never use corrosive cleaning agents or acids as these may seriously damage the stone.

3.8. Extra notes on care and maintenance

Check occasionally (approx. twice per year) that all the nuts and bolts on the door ledges, hinges and grip mechanism are tight. Tighten nuts and bolts by hand, or very lightly with a wrench. If the door is stiff, we recommend greasing the closing mechanism slightly. Use heat-resistant grease for this purpose (max. temp. 1100°C, e.g. copper paste).





3.9. Spare parts

Important: Order DROOFF spare parts from your local dealer. Use only original spare parts manufactured by DROOFF. When ordering, remember to state the model and type number.

3.10. Avoiding mistakes

The stove does not draw properly or smokes when the door is opened.

- Is the feed pressure in the chimney adequate?
- Is the chimney correctly dimensioned and insulated?
- Does the chimney or flue pipe leak? Are the joints tight?
- Does the flue pipe project into the chimney?
- Is the door of another stove open, which is connected to this same chimney?
- Is the wood dry? Are the logs of the right size?
- Is the baffle plate in the right position?

The stove does not heat the room properly

- Is the room too big for the stove?
- Is there too much ash on the grate?
- Is the ash box full?
- Is the flue pipe blocked?
- Are the primary and secondary-air slides closed?
- Is the connected between the stove and the chimney tight?
- Is the wood dry? Are the logs of the right size?

The stove burns too hot

- Are the primary and secondary-air slides open too wide?
- Is the firebox door tightly closed? Is the ash box fully closed?
- Is the feed pressure in the chimney too high?
- Is there too much fuel on the grate?

The window gets too dirty

- Is the chimney draught ok?
  A chimney which is too high or too low may cause the window to soot over.
- Are you burning the right amount of fuel?
- Is the wood dry? Are the logs of the right size?
- Is the fire getting enough oxygen? Does it burn with a bright flame?
- Are the door and window seals effective?
  If the firebox door is not airtight, the stove may be drawing air from the wrong source causing the window to soot over.

3.11. Chimney fire

Damp fuel or fuel of the wrong type may cause soot to accumulate in the chimney which can ignite at any time. Close the primary and secondary air ducts immediately. Close the firebox door immediately. Call the fire brigade and a qualified chimney sweep. Do not use the stove again before obtaining the approval of a qualified heating engineer.

Caution! Do not attempt to extinguish the fire with water. This may cause water vapour to explode in the chimney, resulting in serious damage to the building structure.

How do I know the chimney is on fire?

- Unusually loud intake of air in the stove
- The chimney wall becomes warm or hot
- Wallpaper peels off
- Unusually high amount of smoke emerges from chimney
- Flame visible at the top of chimney

Important note:
Any damage sustained by the stove through non-compliance with these instructions is not covered by either guarantee or warranty.

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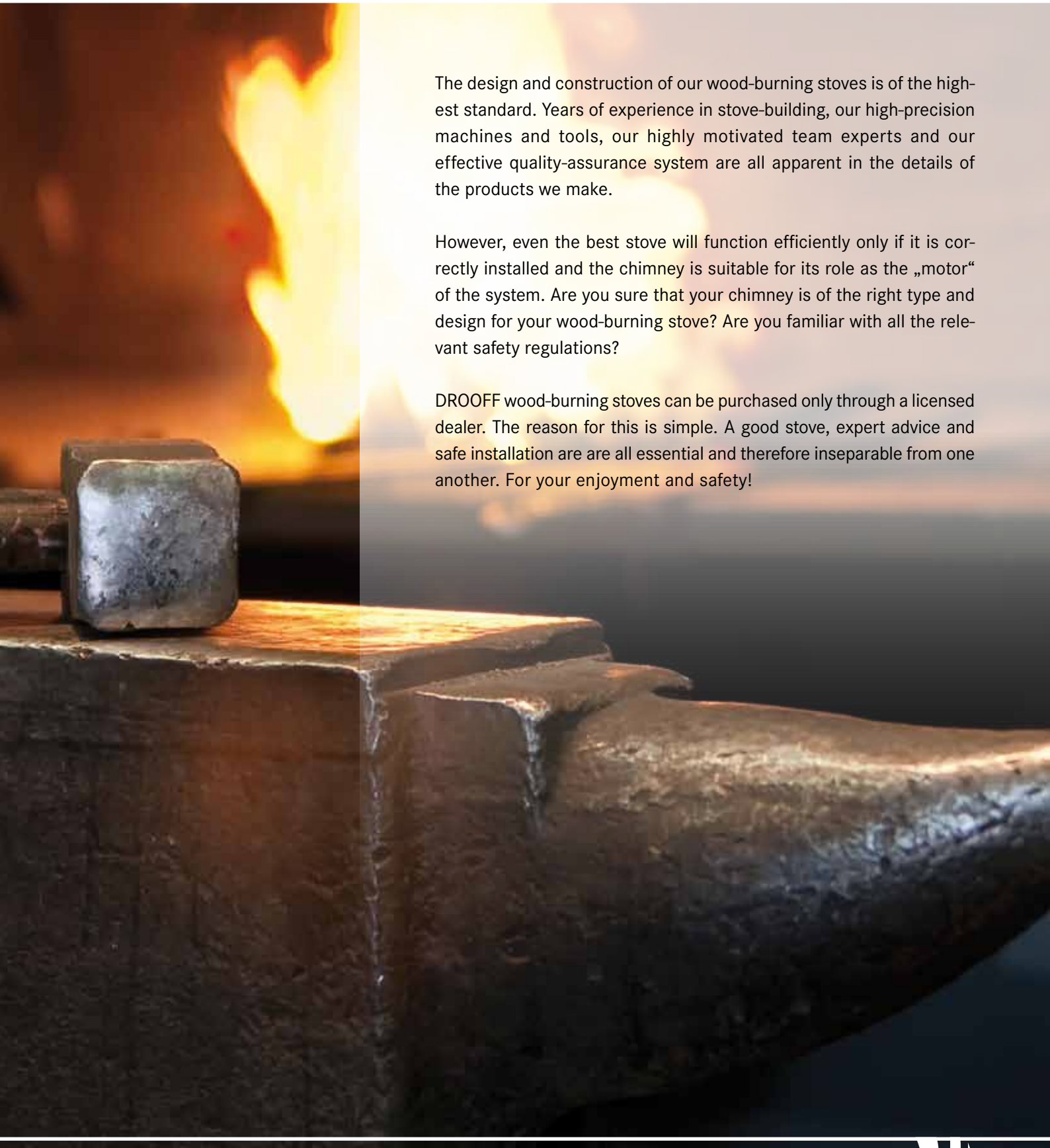

The design and construction of our wood-burning stoves is of the highest standard. Years of experience in stove-building, our high-precision machines and tools, our highly motivated team experts and our effective quality-assurance system are all apparent in the details of the products we make.

However, even the best stove will function efficiently only if it is correctly installed and the chimney is suitable for its role as the „motor“ of the system. Are you sure that your chimney is of the right type and design for your wood-burning stove? Are you familiar with all the relevant safety regulations?

DROOFF wood-burning stoves can be purchased only through a licensed dealer. The reason for this is simple. A good stove, expert advice and safe installation are are all essential and therefore inseparable from one another. For your enjoyment and safety!