



**REKORD**

## Heating with solid fuels

Guide to low-emission and  
environmentally-friendly heating

in wood-burning stoves,  
tiled stoves and heaters.





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### **COSY ATMOSPHERE HEATING WITH SOLID FUELS**

Feeling the warm glow of comfort and safety that envelops the body and soul, enjoying the mesmerizing effect of the flames: The power of fire has always fascinated people. Wood burning and tiled stoves and fireplaces offer an unequalled quality of living comfort. Whether as auxiliary heating in spring or autumn, a cosy source of heat on cold winter days or as the main heating - modern fireplaces fulfil every need and meet the most stringent demands.

As well as the relaxing play of the flames, the pleasant radiated heat of the modern fireplace ensures a sense of well-being and a healthy climate in the room. A positive secondary effect is that heating costs can be directly reduced using solid fuel heaters. Given the increasing prices for heating oil and natural gas, wood and briquettes form an inexpensive alternative. To ensure that heating with solid fuels is not only comfortable and economical but also adheres to current environmental requirements, a harmonised balance between the equipment, the fuel used and the correct operation must always be observed.



## FIRE - HOW DOES IT WORK?

Clean and efficient combustion depends on the correct choice of fuel, the supply of oxygen and the optimum development of the temperature in the firebox. When heating a firebox that is still cold, it is therefore particularly important that suitable firelighters and sticks are used to guarantee an appropriately high initial heat.



For low emissions and optimum use of the fuel, the gases resulting from combustion must remain in the firebox until they are burnt as completely as possible. The optimum supply of air is especially important here: Too little air leads to a lack of oxygen and incomplete combustion. Too much air, on the other hand, can overload the heating appliance or - depending on how and where it is supplied - can lead to a decrease of temperature in the firebox and reduce efficiency. Please observe the instructions of the equipment manufacturer exactly.

## THE OPTIMUM USE OF SOLID FUELS

Due to their differing compositions, the various types of fuels each have different combustion characteristics. Depending on the desires of the owner of the heating appliance and its usage, solid fuels can be specifically selected and meaningfully combined. Wood itself, and briquettes made of brown coal and wood, are composed of both solid and volatile components. The invisible volatile components burn first. As the temperature in the firebox increases, the solid components of the fuel are split into combustible gases and can react with the oxygen in the air supply.

In contrast to oil or gas, combustion takes place in two phases. Volatile components burn first and produce large flames, followed by the solid components, which produce smaller flames. In the course of combustion the flame pattern and the production of heat change accordingly.

### FUEL, OXYGEN AND HEAT ARE NECESSARY TO CREATE FIRE.

If one of these three components is missing, or if the ratio is not correct, the result is no flame or an uneven flame pattern.





### BE AWARE OF RESIDUAL MOISTURE

Wood is the classic fuel for every fire. It heats up the fireplace quickly, burns freely and creates a romantic play of flames. Wood is therefore the optimum fuel when the fireplace is only to be used for a short period. Firewood should principally only consist of untreated and unadulterated dry wood. Hardwoods such as oak and beech, but also birch and fruit tree woods, are particularly suitable.

Freshly cut wood should not be directly used due to the moisture it contains. Damp wood not only burns less well, it releases damaging substances due to the low combustion temperature. Only wood that has been stored for a sufficient period meets the Federal emission regulations of 20% residual moisture! For most fireplaces, a residual moisture content of around 15% is

ideal. The wood logs must be stored for 2 to 3 years in a dry location protected from the weather, or dried by technical means. A moisture measuring device helps to determine the exact residual moisture of your wood.

Treated, painted or coated wood may not be burned under any conditions. Coniferous wood such as fir or spruce is problematic: Since it contains a great deal of resin, it burns with an intense flame and tends to increased production of soot. Coniferous wood is not suitable for use in an open fireplace due to the large number of flying sparks. (Danger of fire!)

Wood logs burn best when most of the air needed for combustion is conducted into the firebox as a secondary air supply above the log. Only a small proportion of the air should be conducted into the firebox from below through the grate. The manufacturer's instruction manual should be referred to for the optimal setup of the heating appliance.



#### **FIREWOOD MUST BE DRY, UNTREATED AND UNADULTERATED.**

Only in this way can the energy source be used optimally and unnecessary contamination of the environment avoided.



### PRACTICAL SLOW BURNER FOR COSY WARMTH

Lausitzer REKORD briquettes are pressed from dried brown coal without the use of any binding agent. They offer a uniformly high quality that is continually checked in laboratory. Look for the 'REKORD' brand name when you're purchasing - it's the sign of high-quality briquettes from Lausitz (Lusatia). In general: Due to the high proportion of solids, when burning lignite briquettes instead of wood more air for combustion must be supplied through the grate at the bottom of the firebox. Lignite briquettes are therefore only approved for heating appliances having a grate in the bottom of the firebox and an ash box.

When the air is correctly regulated, a proportion of it flows around the briquettes from below. The remaining air is fed into the chamber in the same way as already described for the wood logs.



#### CLEVERLY COMBINING WOOD AND REKORD BRIQUETTES.

Use wood to quickly start the fire then add REKORD briquettes to give pleasing flames, slow burning and pleasant warmth. That's how to heat effectively and still go easy on your wallet!

The correct initial heat is important when using lignite briquettes. Suitable firelighters and a sufficient amount of kindling should be used. Briquettes ignite best on an evenly hot bed of embers. Once they ignite, they are characterised by their long-burning, quietly flickering play of flames. REKORD briquettes do not have to be put on the fire as often as wood logs due to their high energy content, and the embers remain comfortably warm overnight. This makes them the ideal fuel for long evenings in front of the fire and in the cold season, when the flames should not only entertain but give out a long even heat.



Hark



## WOOD

Dry wood ignites easily.  
Damp wood only ignites with difficulty or not at all.  
Initially, do not place large logs on the fire.

### IGNITION BEHAVIOUR

Quick.

### COMBUSTION

Short delight in the fire, with a wonderful display of flames.  
No complete combustion.

### COMBUSTING BEHAVIOUR

Only for large logs.

### EMBER FORMATION

High degree of heat initially, quickly burnt up.

### HEAT RELEASE

Fireplace only used for a short period.

### OPTIMUM USE

Renewable raw material resource  
High degree of environmental contamination if residual moisture too is too high.

### ENVIRONMENT

## BRIQUETTES

Ignite best on an existing bed of embers with a large amount of air supplied from below.

Place the lignite briquettes next to each other on the embers a finger width apart.

Slow and even.  
Easy to regulate.

Pleasing play of flames, burns for a long time, retains shape while burning.  
Burns up completely.

Prolonged glowing of embers.  
Stable bed of embers.

Even and prolonged heat.

Long evenings in front of the fire, additional heat in winter. For heating on cool autumn and spring evenings.

Low environmental impact due to even and complete burning.



### THE FIRE AS AUXILIARY HEAT SOURCE

Model solid fuel heaters such as fireplaces and wood-burning and tiled stoves create an oasis of quiet and relaxation. They generate comfort and a sense of well-being. Thanks to optimum combustion systems, modern stoves are highly efficient and have a particularly low impact on the environment. Whether used as auxiliary heating for comfort or as a replacement for other forms of heating on cool days: If correctly operated, a solid fuel heater can reduce heating costs very simply. Given the high prices of heating oil and natural gas, the use of fuels produced locally such as wood and lignite briquettes can contribute to considerable savings in the household budget.

When used for heating, the right combination of the fuels is important: Wood is the ideal fuel for quick heating or when the fireplace is only used for a short period. Lignite briquettes are, in contrast, ideal when the flames should not only create a romantic atmosphere but should also give out warmth for a longer period. Wood quickly heats up the living space, while the lignite briquettes ensure a long period of even warmth.

As well as being approved for both fuels, the size of the room to be heated is of major importance when purchasing a stove. Fireplaces that depending on room air should have around 4 m<sup>2</sup> space available per kW. If the fireplace is intended as the only source of heating, care should be taken that the heater is suitable for continuous use. Stoves marked with DINplus are characterised by particularly low-emission combustion and a high degree of efficiency.

### EFFICIENT HEATING SYSTEMS

If the primary aim is for example permanent and economic heating of a detached house, compact solid fuel boilers and boiler systems are a useful alternative. They allow the use of natural sources of energy such as lignite and wood and can be integrated into a closed heating circuit together with solar plants, oil and gas boilers, heat reservoirs, etc.



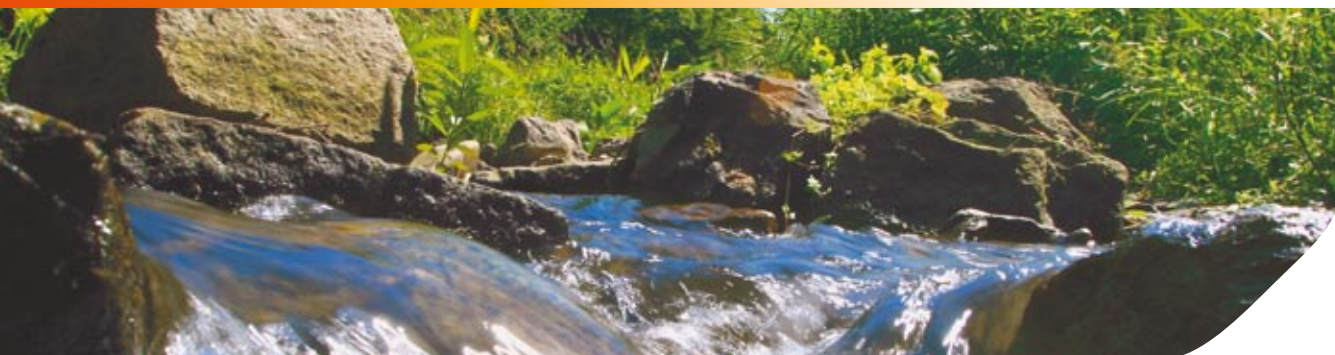
Just as for an oil fired central heating system, the temperatures in different rooms can be individually and conveniently run by regulation equipment. At the same time, the solid fuel boiler gives the greatest possible degree of flexibility and independence with regard to energy supply. Discuss the specific possibilities with your heating and sanitation specialist and let him advise you.

**PLEASE CONTACT YOUR CHIMNEY SWEEP BEFORE BUYING A STOVE!**

He will check the connection possibilities and tell you about legal requirements and regulations.







### HOW DO I HEAT IN AN ENVIRONMENTALLY-FRIENDLY MANNER?

Lausitzer REKORD briquettes meet the tough requirements of the Federal Emission Law. To permit good and clean combustion, the following must be observed

- The correct fuel
- The correct stove
- And correct handling

#### The correct fuel means:

- Natural, untreated and sufficiently dry wood (residual moisture less than 20%) or wood briquettes
- Lignite briquettes without binding agents (We recommend Lausitzer REKORD briquettes)
- A briquette form suitable for the firebox

#### Not suitable fuels are:

- Painted or impregnated wood
- Damp wood
- Coated wood
- Chipboard and similar
- Rubbish

Due to the high resin content and the associated sparks, coniferous wood should not be burnt in stoves.

### WHAT ARE THE QUALITY CHARACTERISTICS OF LAUSITZER REKORD BRIQUETTES?

Lausitzer REKORD briquettes feature

- High heating value ( $\geq 5.3$  kWh/kg, or  $\geq 19$  MJ/kg)
- Low sulphur and ash content
- Optimum combustion behaviour
- Prolonged glowing of embers
- Robust shape when burning and low abrasion
- Clean and easy handling

### WHICH APPLIANCES CAN BE USED FOR BURNING LAUSITZER REKORD BRIQUETTES?

The use of lignite briquettes is only permitted in heating appliances tested and approved by the manufacturer for use with lignite briquettes and noted as such in the operating instructions. In general: Lignite briquettes may only be used in heating appliances with a closed firebox and a grate with an ash box.

Please read the heating appliance operating instructions carefully and, if in doubt, contact the manufacturer of the appliance.

### WHERE CAN I PURCHASE A HEATING APPLIANCE?

There are various ways to obtain a heating appliance. You are certain to find them at a tiled oven builder, a fireplace studio or in a do-it-yourself store. In addition there are various Internet shops where such wood-burning stoves are offered. You may also, of course, contact one of the many tiled oven manufacturers directly.



Oranier

### HOW DO I HEAT WITH REKORD BRIQUETTES?

#### Lighting the fire

Lay suitable firelighters, sufficient kindling and a couple of lignite briquettes on the clean grate. Move the air regulator/slider to the ignition setting or completely open the air inlet. When the fuel has completely ignited, set the air regulator/slider to the desired output level in accordance with the appliance operating instructions, or reduce the supply of air. (An insufficient supply of air leads to smouldering.) Never use unsuitable firelighting aids (e.g. petrol)!



#### Heating operation

After the phase of lighting the fire, embers are formed. For heating, shake off the ash or rake the embers. Lay a couple of lignite briquettes on the embers and move the air regulator/slider to the ignition setting or completely open the air inlet. When the fuel has completely ignited, set the air regulator/slider to the desired heat output level.

#### Keep the embers glowing

After lighting the fuel a bed of embers is establishing. If you want to start heating operation shake off the ash

and/or rake through the embers. Place a few lignite briquettes on the embers and shift the air regulator to the position air supply. If the fuel is lighted shift the air regulator to the desired heat emission.

### WHERE CAN I FIND HELP REGARDING EQUIPMENT?

The instruction manual for the unit usually contains the answers to all important questions. If anything is still unclear, please contact the equipment manufacturer directly.

### WHO CAN HELP WITH TECHNICAL ADVICE?

The district master chimney sweep is responsible for this. He can be found under 'Chimney Sweep' in the Yellow Pages or similar classified directories.

### CAN I COMBINE LAUSITZER REKORD BRIQUETTES AND FIREWOOD?

A combination of firewood and lignite briquettes basically makes sense. In general, the firewood should be used for quick heating up. As soon as the fire burns, add briquettes for long-term heat and embers. Always ensure that the firewood is untreated and sufficiently dry in order to avoid any unnecessary emissions. The wood must be stored in a dry location protected from the weather for two years in order to not exceed the permitted residual moisture content of 20% (in accordance with the Federal Emission Law).



**WHAT SHOULD BE DONE IF THE FIRE SMOKES EXCESSIVELY OR DOES NOT BURN CORRECTLY?**

The production of large amounts of smoke is generally a sign of the wrong fuel or incorrect operation. Painted, damp or coated wood including chipboard, garbage or similar, should never be used in the firebox.

Let the fire extinguish or burn out. Take care that the ashes have fully cooled down and no longer glow, then dispose in the waste bin. Before using your heater again, you should check the quality of your fuel.

As well as the wrong fuel, incorrect air regulation can also be a reason for a fire not burning correctly. You should consult the instruction manual for the heater.

**THE VIEWING WINDOW OF MY UNIT IS SOOTY. WHAT CAN I DO?**

A sooty viewing window usually means incorrect operation of the unit or the use of the wrong or low-quality fuel. If you follow the instructions for use of your unit, this should not occur. The reason could be briquettes that do not meet the quality standards of the Lausitzer REKORD briquettes, treated wood or wood that is too damp. A dirty viewing window can be cleaned in dry condition using glass cleaner, special viewing window soot cleaner or a cream cleaner.

**WHAT SHOULD BE DONE WITH THE PACKAGING?**

The packaging of the Lausitzer REKORD briquettes can be normally disposed of in the waste bin (for the foil packaging and wraps) or the waste paper bin (for the paper bags).

**WHAT SHOULD I DO WITH THE ASHES?**

Never dispose of the hot ashes directly in the waste bin! The ashes should be first carefully filled into a fireproof metal container and then allowed to cool off completely. Take care that the metal container rests on a fireproof base (e.g. tiles or stone) so that it is not damaged by any residual heat. When the ashes are cold and the embers are extinguished, the remnants can be slowly emptied into the waste bin.

**ALWAYS ENSURE THAT THERE ARE NO GLOWING EMBERS IN THE ASHES!**

Even in cold ashes, embers can still set fire to other waste. For this reason, collect the ashes separately in a fireproof container.





## HEATING, WINDOWS, DOORS – DO'S AND DON'TS

### Every degree less saves 6% energy.

You should therefore ensure the correct temperature in the following areas: 24 °C in the bathroom, 16 to 18 °C in the bedroom, 18 to 20 °C in the kitchen, 16 to 18 °C in the hallway, 20 to 22 °C in the dining and living areas. Furniture or curtains standing in front of radiators will reduce their heat output by up to 15%.

### Do not tilt your windows to air out rooms.

To permit a complete exchange of used damp interior air and fresh exterior air, you should always completely open the window to the room. In the morning, all rooms should be thoroughly ventilated for between 5 and 30 minutes, for a shorter period in winter and a longer period in summer. Switch off the heating before and during ventilation. Ideal: Ventilate the rooms 3 to 4 times a day depending on their usage and the season.

### Close any roller blinds or shutters.

When closed, these retain heat in the room and offer better protection against cold.

A heating controller with a weather-dependent control unit also helps to save energy. However, you should never allow your **rooms too cool out completely.**

**Controlled ventilation and air exhaust systems** equipped with a heat recovery unit provide a continuous supply of fresh air and removal of used air independently of windows. Dust and noise are excluded, the heat contained in the exhaust air is transferred to the incoming ventilation air.

### REKORD brand quality at a glance:

- No binding agents used in pressing process
- Regular quality management checks
- High calorific value
- Attractive glow of flames
- Long-lasting glow of embers

### Comparison of thermal units

Calorific value	≈ 19.0 MJ/kg
equates to	≈ 5,3 kWh/kg
	≈ 4,539 kcal/kg

## FOR ALL QUESTIONS REGARDING LAUSITZER REKORD PRODUCTS

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**[www.brikett-rekord.com](http://www.brikett-rekord.com)**



# FEEL THE HEAT OF THE FLAMES

Wood and lignite - Quality fuels



Warming your body and soul, experiencing comfort with all your senses – where better than in front of your own fire? But which heating appliance is the right one? How can you quickly get a romantic fire blazing? And how can you heat both environmentally correctly and inexpensively?

We've put together a package of information for you with lots of advice and many practical tips on heating with solid fuels. It tells you how to operate your fireplace correctly, how to select and use suitable high quality fuels and how to obtain information before purchasing a new wood-burning or tiled stove or other heating appliance.

We'll also, of course, be happy to advise you personally. Your Lausitzer REKORD dealer will advise you quickly and objectively and give you any guidance you may require.

YOUR „LAUSITZER REKORD“ DEALER

[WWW.BRIKETT-REKORD.COM](http://WWW.BRIKETT-REKORD.COM)



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