

**Thank you for your trust and for choosing our heater to warm your house. We produce our fireplaces with your safety and comfort in mind. We can be confident that our commitment to designing and manufacturing fireplaces will be matched by your satisfaction in making this excellent choice. Please read all the sections in this Manual carefully before starting any installation work and use. Please contact our technical-support department if you have any queries or doubts. For any further information go to [www.kratki.com](http://www.kratki.com)**

Kratki.pl Marek Bal is a well-known and respected manufacturer of heating devices, both on the Polish and European markets. Our products are made on the basis of restrictive standards. Each fireplace insert manufactured by the company undergoes factory quality control, during which it passes rigorous safety tests. The use of top-quality materials in production guarantees the smooth and reliable operation of the appliance to the final user.

This instruction booklet contains all the information required for correct connection, operation and maintenance of the fireplace stove.

### **ATTENTION!!!**

**Please take care to use your fireplace properly: burn the right wood, clean it regularly and it will reward you with many wonderful and warm autumns and winters. Here are some guidelines for the proper maintenance of Kratki.pl fireplace inserts:**

1. the stove should be installed and fitted by qualified persons
2. the flue pipe should be inspected at least twice a year, and cleaned if requires.
3. use dry hardwoods with a maximum moisture content of 20% for burning.
4. before or after each heating season, replace the seal (shur in the door, cord under the glass)
5. remove ashes from the ashpan regularly
6. do not overheat the stove: it is assumed that 1 kg of wood with a moisture content of up to 20% yields 3 kW of power. The load must be compatible with the declared nominal power. If the declared power is 6 kW, the loading should be 2 kg of wood.

The glass must be cleaned with a cleaning product designed for this purpose, making sure that it is not applied directly onto the glass but onto a cloth. Make sure that the liquid does not drip onto the cords and steel parts of the stove.

**Clean the steel parts of the stove only when dry, the stove must not be exposed to moisture.**

### **INTRODUCTION**

**THE REQUIREMENTS FOR THE CONDITIONS AND INSTALLATION OF STOVES SUCH AS FIREPLACE INSERTS OR FREE STANDING WOOD-BURNING SPACE HEATERS, CAN BE FOUND IN THE STANDARDS IN FORCE IN EACH COUNTRY AS WELL AS IN NATIONAL AND LOCAL REGULATIONS. THE PROVISIONS CONTAINED THEREIN MUST BE BE CAREFUL!**

To prevent the risk of fire, the appliance must be installed in accordance with the applicable standards and technical rules referred to in the manual. Its installation must be carried out by a professional or qualified person. The appliance complies with standard EN 16510 and is CE certified.

Always comply with the regulations in force at the place where the appliance is installed. The appliance must be installed in accordance with current building code standards. The insert must be positioned at a safe distance from any flammable products. It may be necessary to protect the wall and surrounding materials of the insert. The appliance must be placed on a solid, non-combustible

base. The chimney must be airtight and have smooth sides, and should be cleaned of soot and any other debris before connection. The connection between the chimney and the stove must be airtight and made of non-combustible materials protected against oxidation (enamelled or steel flue pipe).

If the chimney produces a poor draught, consider laying new flues. It is also important that if the chimney produces poor draught, consider laying a new flue pipe. Have the flue pipe inspected by a master chimney sweep, and any alterations made to it by an authorised company so that it complies with local regulations.

### **PURPOSE**

The free-standing stoves manufactured by kratki.pl are stoves with manual fuel insertion, connected to the building only by a link through which exhaust fumes are discharged outside and a lockable combustion door. They are designed for hardwoods such as hornbeam, oak, beech, acacia, elm, maple, birch with a moisture content of <20%. They serve as an additional source of heat in the rooms in which they are installed.

### **INTRODUCTORY INFORMATION**

**NOTE!** To avoid fire hazards, the fireplace stove must be installed in accordance with the relevant provisions of the building regulations and the technical instructions given in these installation and use instructions. The design of the fireplace installation should be carried out by a qualified specialist. Before putting the fireplace into operation, a technical inspection report must be carried out, including a chimney sweep's and an expert's opinion.

### **GENERAL COMMENTS**

- a) Before starting to install the heater, the flue pipe must be inspected and approved as to its technical parameters and condition - tightness, patency.
- b) Installation and start-up of the heater should be carried out by an installation company with appropriate authorisation and experience.
- c) The heater should be located as close as possible to the flue pipe. The room in which it will be installed must have an efficient ventilation system and the necessary amount of air required for proper operation of the heater.
- d) Before using the heater, the stickers must be removed from the glass.
- e) The technical parameters of the heater are valid for the fuel specified in these instructions.
- f) Inspection intervals for the flue pipe must be strictly observed (at least twice a year).
- g) In accordance with current law, the goat-type heater may not be the only source of heat, but only a supplement to the existing heating system. The reason for this type of regulation is the need to ensure heating of the building in the event of long-term absence of the residents.

The installation of the heater must be carried out in accordance with the provisions of the standards in force in this area, the requirements of the building regulations and the fire safety standards in force in this area.

Detailed regulations for construction safety, fire safety and operational safety are contained in the ordinances and building regulations applicable in the respective country.

### **FUEL SELECTION / Recommended fuel**

- The manufacturer recommends the use of logs of deciduous trees such as beech, hornbeam, oak, alder, birch, ash, etc. The logs should be of a length similar to the width of the grate. The length of the logs should be close to the width of the grate. They should be laid horizontally on the grate. Do not use logs which are too long and stack them vertically as they may obstruct the flow of

secondary air and tipping over may damage the stove components e.g. the glass.

- The moisture content of the wood used to fire the appliance should not exceed 20% which corresponds to wood which has been seasoned for 2 years after felling and stored under a roof.

### **Fuel not recommended**

Avoid firing logs or sticks with a moisture content of more than 20%, as this may lead to a failure to achieve the declared technical parameters - reduced heat output.

It is not advisable to use coniferous logs or stubbled wood for fueling the appliance, as these cause the appliance to burn intensively and require more frequent cleaning of the appliance and the flue pipe. Unsuitable fuel also affects the degree of soiling of the glass.

### **Prohibited fuel**

The following may not be burnt in the heaters: minerals (e.g.: coal, tropical wood (e.g.: mahogany)), chemical products or liquids such as oil, alcohol, petrol, naphthalene, laminated panels, impregnated or pressed pieces of wood bound with glue, rubbish. If other fuels are permitted, this will be stated on the rating plate.

### **ASSEMBLY AND INSTALLATION OF THE HEATER**

Installation of the heater should be carried out by a person who is qualified to carry out this type of installation work. This is a condition of safe use. The installer should confirm in the guarantee card that the installation work has been carried out correctly by signing and stamping the guarantee. In the event of failure to comply with this requirement, the Purchaser will lose the right to warranty claims against the heater manufacturer.

**Before installing the unit, the mechanical strength of the substrate on which it is to be placed should also be checked, taking into account the weight of the unit.**

### **PREPARATION FOR INSTALLATION Contact the heater manufacturer.**

The heater is delivered ready for installation. After unpacking, the unit must be checked for completeness in accordance with these operating instructions. In addition, check the operation of:

- the mechanism for adjusting the air supply to the combustion chamber (ash pan);
  - the front door locking mechanism (hinges, handle);
  - the integrity of the casing of the flue pipe and smoke duct must be guaranteed by a minimum of 60 minutes fire resistance;
- condition of glazing
- installation of the heater may be carried out after a positive result of a chimney sweep's expert opinion on the flue pipe.

### **CONNECTION TO CHIMNEY**

It is possible to connect the stove to a shared chimney. When connecting to a common chimney the door must always be closed. The chimney pressure should be 12 Pa.

Determine the minimum chimney draught for the nominal heat output [Pa]:

The chimney draught should be:

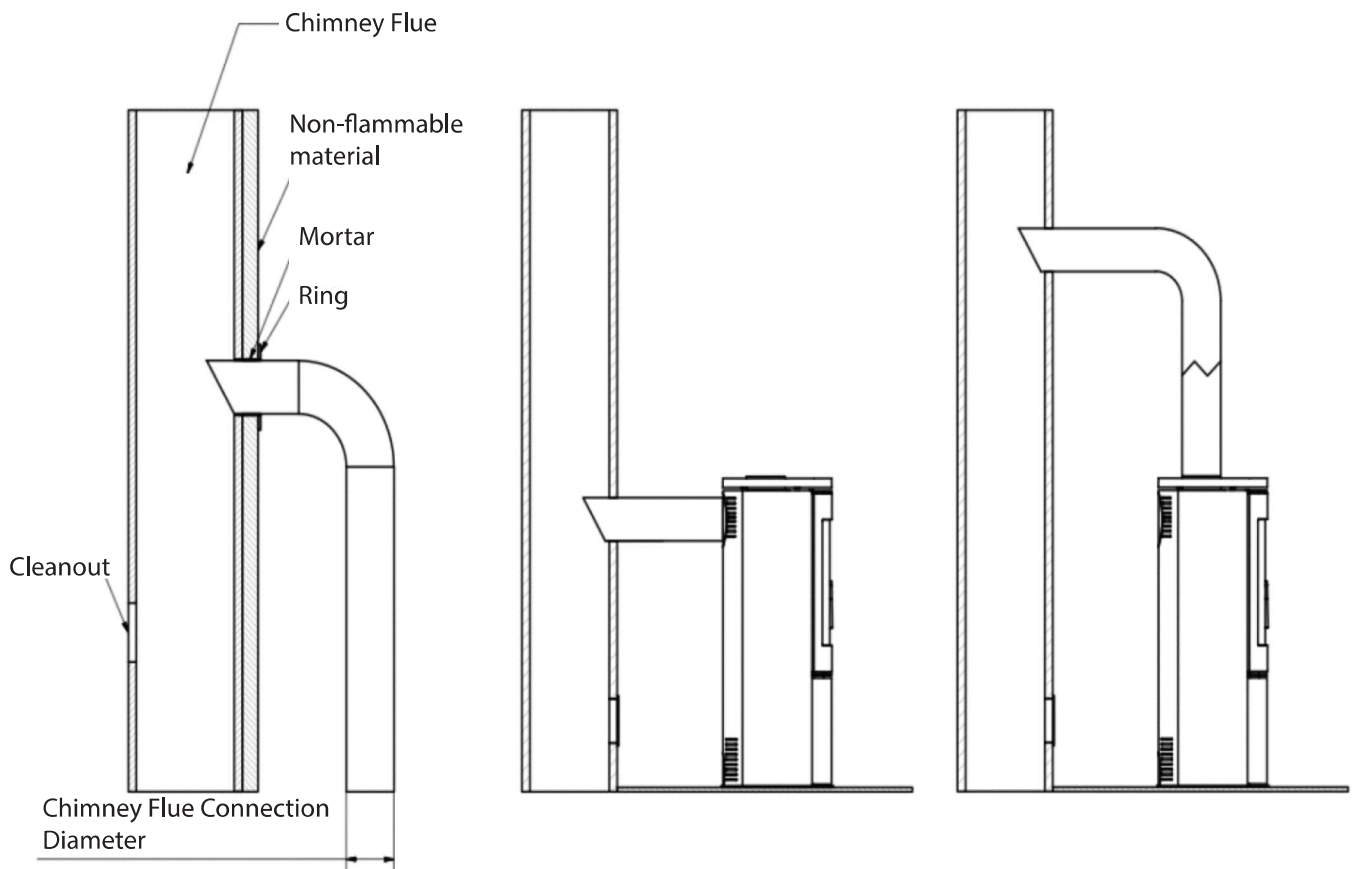
- Minimum draught:  $6 \pm 1$  Pa
- **Medium, recommended draught:  $12 \pm 2$  Pa**
- Maximum draught:  $15 \pm 2$  Pa

The chimney must be airtight and its walls smooth. It should be cleaned of soot and any impurities before connection. The connection between the chimney and the appliance must be airtight and

made of non-combustible material protected against oxidation (e.g. enamelled steel flue pipe). If the chimney produces poor draught, consider laying new flues. It is also important that the chimney does not produce excessive draught, in which case a draught stabiliser should be installed in the chimney. Alternatively, special chimney finials are available to regulate the draught. Chimney flue inspection  
The chimney flue should be inspected by a master chimney sweep and any alterations may be carried out by an authorised company so that the requirements are met.

Connection to the flue pipe must be carried out in accordance with the standard. The minimum effective height of flue flues is 4-6 mb.

The length of the connection between the appliance and the chimney should not exceed 1/4 of the total height of the chimney.



### VENTILATION IN THE ROOM WHERE THE Stove IS INSTALLED

The room in which the stove is to be installed must have a volume resulting from the ratio  $4 \text{ m}^3 \times 1 \text{ kW}$  of nominal heat output of the appliance, but not less than  $30 \text{ m}^3$ . In addition, it should have an efficient ventilation system and provide the necessary amount of air required for the correct operation of the stove. It is assumed that approximately  $8 \text{ m}^3$  of air is needed to burn  $1 \text{ kg}$  of wood. The room in which the stove is to be installed, which draws air from the room, must be free of extraction devices and other appliances with a hearth. In rooms with mechanical ventilation or very tight window frames, an individual air supply to the combustion chamber must be used. Ideally, a fresh air intake from the outside should be used for this purpose. The combustion air intake should be selected so that it cannot become clogged. Efficient combustion is guaranteed by connecting the intake of outside air. The inlet grilles of the room ventilation system should be secured against self-closing.

### SAFETY SETTING OF THE Stove - DISTANCES

During all handling and operation of the stove, remember that its

components may be hot, therefore, gloves should be used for handling protective gloves. During the operation and use of the stove, it is necessary to follow the rules that provide basic safety conditions:

- Familiarize yourself with the instruction manual of the heater and strictly follow its provisions;
  - The stove must be installed and started up by the installer in accordance with the safety rules
  - Do not leave temperature-sensitive items near the glass of the stove, do not extinguish the fire
- Do not leave heat-sensitive items in the vicinity of the stove glass, do not put out the fire with water in the firebox, do not operate the stove with a broken glass, and do not place flammable items in the vicinity of the stove.

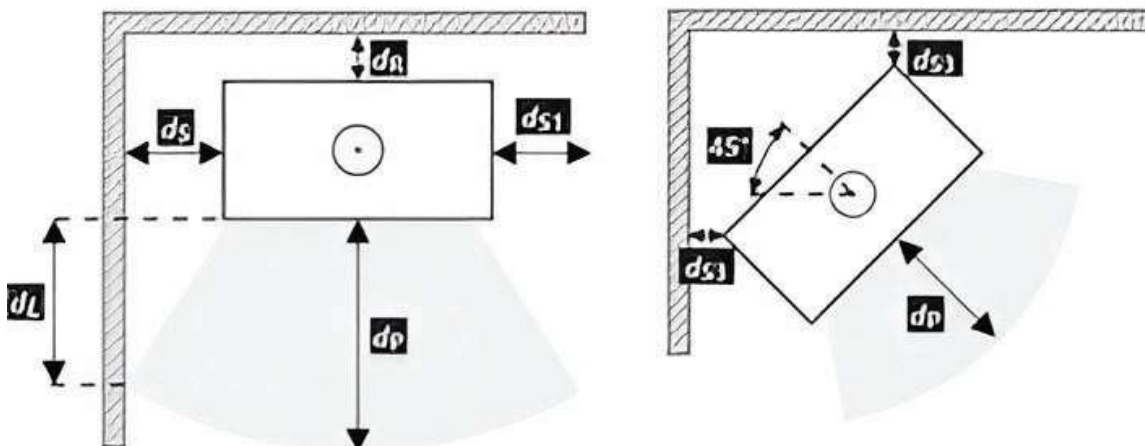
flammable elements;

- Do not allow children, animals, disabled persons near the stove;
- Entrust any repairs to the installer and use spare parts from the stove manufacturer;
- Any changes to the design, installation rules, use, without the written consent of the manufacturer's consent;
- Do not leave the device unattended.

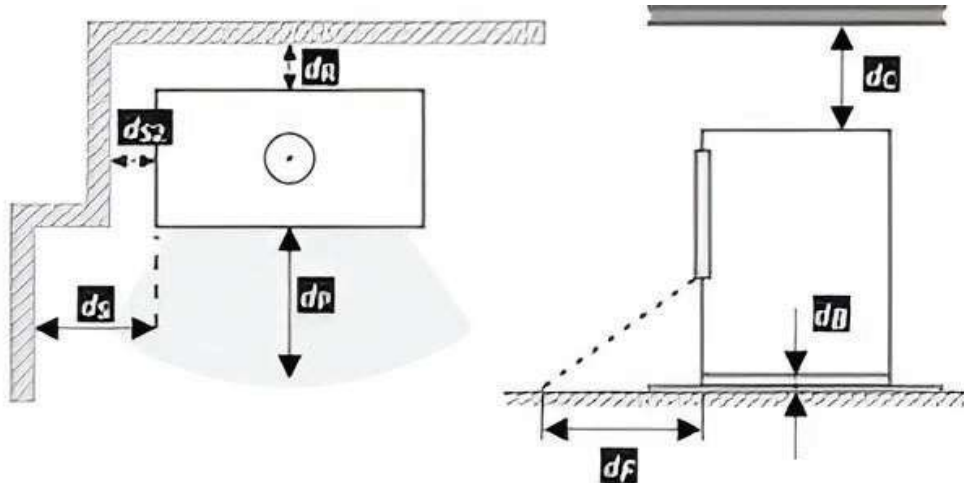
#### NOTE!

The stove is hot during operation and should not be touched. Wear protective gloves when operating the stove.

Minimum distances from combustible materials, in mm	
bottom (dB)	0
Front floor (dF)	250
ceiling (dC)	>750
rear (dR)	400
side (dS)	300
side radiation area (dL)	700
adjacent combustible materials (e.g., furniture) (dP)	900







Ventilation of the combustion chamber can be carried out from the room or from the outside. If the fireplace stove draws air from the room, it should have an efficient supply/exhaust ventilation system.

Insufficient oxygen supply to the combustion chamber may result in: problems with lighting the stove, excessive smoke on the glass, smoke in the room, ineffective combustion.

The stove has a built-in air intake from the outside - intake spigot of 100mm. Air control is carried out by mechanisms (regulators) located below the insert door. The stove has a triple system of aeration of the combustion chamber; primary and secondary air.

The distribution of air to the combustion chamber takes place in the space (air chamber) below the plate - grate on which combustion takes place. Primary air is supplied under the grate located in the floor of the combustion chamber. Secondary air is supplied through a special duct (located on the rear wall of the stove), through a system of holes, to the combustion chamber.

Secondary combustion involves the afterburning of particles in the smoke. The stove also has an air curtain system. The air directed through the air control "sweeps" the glass causing the fire and smoke to move away from the glass, which significantly reduces soot build-up. In this way, oxygen is supplied to the upper part of the combustion chamber, where the gases produced during wood combustion are post-combusted, thus reducing the emission of harmful CO into the atmosphere.

## STARTING UP AND OPERATING THE Stove - GENERAL CONSIDERATIONS

### LIGHTING THE FREE-STANDING Stove

The only correct and recommended way to light fireplaces and free-standing stoves is from the top. It is advisable not to fill the firebox completely with wood. It is assumed that 1 kg of wood with a humidity of up to 20% gives 3 kW of power. Before adding wood, allow the flames to die down and do not add too much heat. After lighting the fire, fill the combustion chamber with wood, arranging the fuel in such a way as to fill the chamber reasonably for the intended burning time as determined by the user on the basis of individual experience and of course taking into account the rated power of the appliance.

The door should be closed every time. If the stove has not been used for a long time, it is advisable to start the fire at a lower power.

## STEP-BY-STEP INSTRUCTIONS

### 1. PREPARATION OF MATERIALS

- Several larger logs (split; max. moisture content up to 20%; diameter approx. 10-13 cm) - Handful of small kindling (diameter approx. 2-5 cm; max. moisture content up to 20%,)
- Any kind of fire starter
- Matches/lighters

### 2. FURNACE PREPARATION

- Open all air vents/passages in the stove
- Place the larger logs on the bottom of the firebox in an alternating manner
- Place a layer of small firewood on top of the larger logs (no more than 3 layers). Stack the logs leaving gaps between them to ensure a free flow of air.
- Place kindling on top of the top layer of slabs



### FIRING UP

**Light the kindling and close the fireplace door. Depending on the length of the flue pipe and its draught, kindling may take several to several minutes. If there is insufficient draught in the chimney, unseal the fireplace door at the beginning of lighting by opening it. It is also a good idea to open a window in the room where the fireplace is installed in order to get more air into the room (only in the case of appliances that do not have a built-in air intake from the outside).**

The freestanding solid fuel space heater is designed to burn wood with a moisture content of up to 20%. The use of coal, coke, coal products, plastics, garbage, rags and other combustible substances is not allowed.

A practical assessment of the moisture content of the wood fuel used is as follows. Wood, which is to have a moisture content of 18-20%, must be seasoned for a period of 18-24 months or undergo a drying process in kilns. As the moisture content of the wood is reduced, its calorific value increases, which means financial savings - up to 30% of the total weight of wood needed for one heating season. If wood with too high a moisture content is used for combustion, there may be an excessive consumption of energy required to evaporate the moisture and the formation of condensate in the chimney or combustion chamber, which affects the heating of the room.

Another negative phenomenon observed in the use of wood with too high humidity is the phenomenon of creosote, a deposit which destroys the flue pipe, and which, in limited cases, can ignite and cause a chimney fire.

It is therefore advisable to use hardwoods such as oak, beech, hornbeam and birch. Coniferous trees are characterised by lower energy values, and burning them causes intense burnt glass.

## **MAINTENANCE OF FREE-STANDING SPACE HEATERS**

Maintenance of the stove and smoke ducts consists of the following guidelines. The periodic or scheduled maintenance of the stove includes: ash removal, cleaning of the windscreen, cleaning of the combustion chamber, cleaning of the flue pipe.

### **FLUE MAINTENANCE**

The basis for the correct and safe operation of the stove is a properly cleaned and maintained chimney. The user is obliged to clean the chimney in accordance with current regulations. The frequency of cleaning and maintenance depends on its insulation and on the type of wood used. The use of unseasoned wood with a moisture content of more than 20% or coniferous wood will result in the risk of a soot fire in the chimney due to the deposition of a thick layer of flammable creosote, which must be removed regularly. An unremoved layer of creosote inside the chimney liner destroys the seal and also contributes to corrosion.

There is therefore a need for periodic inspection and maintenance of the stove and associated components.

### **CLEANING THE FURNACE**

Clean the steel parts of the stove dry only. The stove must not be exposed to moisture.

The firebox must be thoroughly cleaned and inspected before and after each heating season - leaving ash in the ash drawer for a long period will cause chemical corrosion of the ash pan.

During use, periodically clean the firebox of the fireplace stove (the frequency of this activity depends on the type and moisture content of the wood used). Use a poker, scraper, brush, fireplace Hoover, or ash separator to clean the combustion components.

### **CLEANING THE GLASS**

The glass gets hot and should therefore be cleaned when the firebox has cooled down. Use only approved cleaning products for this purpose.

Use only approved cleaning products for this purpose (do not use them on the fireplace stove). Do not use abrasive cleaners; these may scratch the glass.

Do not apply glass cleaning liquid directly to the glass, only to paper or a cloth. Dripping liquid may cause corrosion of the stove's steel components and loss of the cushioning properties of the gaskets.

### **DOORS/SEALS**

The friction surfaces of the door hinges and locking mechanism should be lubricated occasionally with graphite grease. Inspect and clean the entire stove before each heating season. Pay particular attention to the condition of the gaskets and replace them before or after each heating season or if you notice wear.

### **ASH REMOVAL**

Ash should be removed before each start-up of the stove. If the stove is not in regular use the ash should be removed after lighting and cooling down of the stove.

This is done by emptying the ash container located below the grate. The ash should be emptied regularly to prevent ash falling out of the firebox. Do not allow the ash to fall over the hurdle. Ash should be removed from a cold stove.

### **Disposal**

#### **How to dispose of packaging and end-of-life product.**

It is recommended to dispose of the packaging and unnecessary end-of-life product as follows.

#### **Packaging:**

(a) wood parts ( disposable pallet) put into the container with segregated waste. (b) plastic packaging put into the container with segregated waste. (c) give the screws and handles to the recycle collection point (d) moisture



separator bag(applies to export shipments made by sea) put into the segregated waste.

**Discontinued product:**

(a) dismantle the glass ceramics and put them in the container with segregated waste, (b) put the seals and chamotte bricks/interior coverings in the container with municipal/construction waste, (c) give the metal parts of the appliance to a metal/recyclable materials collection point.