General installation and operation manual for Romotop fireplace stoves

- valid in general for all types of fireplace stoves manufactured by Romotop spol. s.r.o. The attached technical sheet lists detailed technical data for each type of fireplace stove.

The fireplace stoves may only be operated in accordance with this manual! No unauthorized changes may be performed on the fireplace stoves!

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1. Introduction

Thank you for purchasing our fireplace stove and congratulations for becoming the owners of top-notch fireplace stoves by Romotop spol. s.r.o., one of the forefront European manufacturers of fireplace heaters.

Our fireplace stoves can function as additional heating to augment the atmosphere of your home or recreational building or as the main source of environmentally-friendly heating with high heat output, dust-free operation and perfect combustion. All fireplace heaters produced by our company are tested in accordance with $\check{C}SN EN 13 240/2002 + A2/2005$.

Please read through the manual and technical sheet thoroughly. The user is obliged to get properly acquainted with proper installation and operation of this device with regards to its safe operation. Please keep the manual and technical sheet so that you can brush up all the information necessary for the correct operation of your fireplace stove before each heating season.

We only provide a warranty on our products if all the instructions listed in this operation manual are adhered to.

2. Technical description

Fireplace stoves are intended for installation into various interiors (apartments, recreation buildings, restaurants). Romotop fireplace stoves are manufactured from quality construction materials – cast metal, CORTEN steel and quality construction and fittings steel, with stressed parts made of HARDOX steel. The surface of steel constructions is protected by a refractory opaque paint. Refractory paints are not anti-corrosive. The combustion chamber of full-plate fireplace stoves is padded by removable chamotte desks, which are not connected by any paste material to prevent damage by heat dilatation. The combustion chamber can be firmly closed by doors with special heat-resistant glass. The glass not only increases the aesthetics of the flickering flames, but also facilitates pleasant heat radiation. The glass also prevents the sparks from the burning wood and smoke from entering the room. The floor of the combustion chamber is usually equipped with a removable castiron grate. Usually, a barrier, or alternatively a sheet metal or ceramic mould, is placed in front of the grate to prevent the fuel falling and sliding onto the doors (front window). Grate fireplaces include room for an ashpan under the grate. Some types allow custom-configuration of the flue pipe throat for top- or back-side exhaustion. The fireplace stoves are manufactured with dual coating. The area between the coatings is used for air heating. The upper part of the outer coating includes vents for the heated air. The outer coating may include ceramics or stone to highlight the design and improve the heat accumulation properties of the fireplace stove. Some types of fireplace stoves have adapted the double-coating construction to heat warm service water with an optional connection to the standard heating system. These fireplace stoves may be equipped with a cooling loop to avoid overheating in case of power outages.

Fireplace stoves equipped with a separate intake of primary and secondary combustion air include the appropriate control elements. The primary air is taken to the burning fuel (usually through the ashpan and grate) and is used for primary combustion. The secondary air supports combustion of residual combustible gases in the exhaust, increasing the output of the heater and significantly reduces the amount of pollutants escaping into the atmosphere. The secondary air is mostly taken to the area above the burning fuel. Its presence causes the cold air to roll around the inner side of the front glass. This process simultaneously prevents the blackening of the front glass. The secondary air also participates in the primary combustion process when the primary air intake is partially or completely sealed. Keep the primary air intake fully open at the beginning of the combustion process, when the chimney draft is still weak. After the chimney heats up, you can partially or even completely close the primary air intake, based on the target output of the fireplace stove. It is also possible to reduce the fueling or limit the chimney draft by attaching a smoke shutter (a manual shutter in the flue pipe limiting the air intake to at most **75%**) to reduce the output of the fireplace stove. This is recommended especially for chimney draft around and above **20Pa**. The secondary damper is intended to fully close the stove when it is not in operation. The fireplace and ashpan covers must always be closed except for starting operation, adding fuel and removing solid combustion remnants to prevent exhausts entering the room.

Some fireplace stoves are equipped with a heat accumulation exchanger, improving the efficiency of the fireplace stoves and maximally utilizing the fuel energy.

Some fireplace stoves are manufactured with a central air intake (CAI). This allows air to flow into the combustion chamber in the fireplace stove from the exterior, halls, technical rooms etc. Fireplace stoves with a CAI are not dependent on the amount of air in the heated area. Thus, they not only contribute to a pleasant atmosphere in your home, but also reduce energy expenses (since heated air already in the room is not consumed).

Fireplace stoves with **CAI** are very suitable for installation into low-energy houses. It is also possible to equip the heating system of some fireplace stoves with CAI with electronic combustion regulation to increase comfort. This can additionally increase the combustion process and stoking intervals, increase operation safety and prevent uneconomic heating and over-heating of fireplace stoves (the shutter of the central air intake is controlled by a control unit and servomotor in relation to the current combustion phase and output exhaust temperature).

Warning: The fireplace stoves are not manufactured to provide continual heating and are intended for periodic interrupted operation, mostly due to the need to empty the ashpan when the ash has cooled down.

3. Safety regulations

The fireplace stoves may be used in normal environments in accordance with ČSN 33 2000-3/1995. In case of change of environment that could cause a temporary danger of fire or explosion (e.g. gluing linoleum, PVC, working with paints, etc), the fireplace stove must be put out of operation in time, i.e. before the occurrence of the dangerous situation. Furthermore, the fireplace stoves can be used only after the room is thoroughly aired, preferably by wind draft.

A supply of sufficient amount of combustion air and room ventilation air must be ensured when the fireplace stoves are in operation, especially with another heat device running simultaneously (approx. 8 to 15 m^3 for burning 1 kg of fuel)! When doors and windows are tightly sealed, this might not be the case! This is solved by a CAI connected into a separate room. The regulation grate for combustion, ventilation and heating air must not be obstructed. When stoking fuel, always open the door very slowly. You will prevent smoke and ash from escaping into the room. The fireplace stoves require casual attendance and inspection.

Flammable fuels must not be used for stoking or heating! In addition, burning plastic material of any kind, wood materials with various chemical bonding agents (chipboards, etc) or unsorted domestic waste with remaining plastics is prohibited by law no. 201/2012.

Make sure to prevent children from handling the fireplace stoves during heating. The fireplace stove may only be operated by an adult person!

During heating all handles and knobs must be operated using a pair of tongs, hook or by a hand protected by a glove (pot-holder) - there's a danger of burns! Objects made from flammable materials that could be set on fire must not be stored on the fireplace stoves during operation and while hot. Please pay special attention when handling the ashpan and when removing hot ash due to danger of burns! The hot ash must not get in contact with flammable objects - e.g. when throwing in communal waste containers.

When the fireplace stove is used only seasonally and with unfavorable draft or weather conditions, special attention must be paid when putting the stove into operation. When the fireplace stove is not in operation for a longer period of time, the flue ways must be checked for obstructions before further operation.

The appropriate safety regulations for fireplace stove operation and installation must be adhered to in accordance with ČSN 06 1008/1997, especially:

3.1 Safe distance:

3.1.1 Safe distance of fireplace stoves from flammable materials

When installing the fireplace stove in a place containing flammable materials belonging to class **B**, **C1** and **C2**, the required safe distance in accordance with ČSN 06 1008/1997 is 80cm from doors and 20cm in other directions, unless otherwise specified by the manufacturer refer to the Technical sheet and the Name plate.

When installing the fireplace stove in a place containing flammable materials belonging to class C3, the distance must be doubled. Information on the degree of flammability of certain building materials is listed in ČSN 73 0823/1983. When the prescribed safe distance of the heater from the flammable materials cannot be kept, it is necessary to use a protective screen according to 4.4.1 ČSN 06 1008/1997.

Building materials sorted by grade of flammability

A non-flammable granite, sandstone, concrete, bricks, ceramic tiles, special plasters B not easily flammable Akumin, Heraklith, Lignos, Itaver C1 hardly flammable hardwood, plywood, Sirkolit, hardened paper, Umakart C2 medium flammable chipboards, Solodur, cork boards, rubber, flooring C3 easily flammable fibreboards, polysterene, polyurethane



Safe distance of chimneys from flammable materials and building constructions 3.1.2

The safe distance from door case covers and similarly located building constructions from flammable materials and from pipeline installation including its insulation is at least 20cm. The safe distance from other flammable parts of the building construction at least 40cm (see fig.2) according to ČSN 06 1008/1997. This includes building materials belonging to classes **B**, C1 and C2 as defined in ČSN EN 13501-1/2010 (see table no.1) The same applies for walls and especially ceilings with plaster on a flammable surface, e.g. crates, planks, etc.! When the prescribed safe distances cannot be kept, the danger of fire must be prevented through construction solutions, non-flammable applications, heat-resistant insulations or protection screens.

3.2 Floor protection

Unless the fireplace stove is installed on a 100% non-flammable floor, it is necessary to place the stove on a non-flammable insulation mat, e.g. metal plate (at least 2mm thick), ceramics, hardened glass, stone, in order to prevent the flammable floor to exceed a temperature of 50°C during operation in accordance with ČSN 73 4230/2004.

According to 5.1.3.3 of ČSN 06 1008/1997, the insulation mat must exceed the fireplace by at least **30cm** in the vertical direction from the stove stoking door. **10cm** in the horizontal direction from the stove stoking door.

Minimal distances: A > 80cm B > 20cm

Stove heater

Items made of flammable materials may not be placed on top of or at a less-than-safe distance from the fireplace stoves.

3.3 Chimney fire prevention measures:

Ordinary operation, especially with humid fuel, leads to the settling of ash and tar in the chimney. Neglecting regular checking and cleaning of the chimney in accordance with the government regulation no. 91/2010 from 1st March 2010 supplying regulation no. 111/1998 Coll. increases the danger of fire.

In case of ash or tar catching fire in the chimney, please follow this procedure:

- do not under any circumstances extinguish the fire with water as it would create an abnormal amount of steam and subsequently rip the chimney open

- if possible, the combustion chamber should be covered with dry sand, which will extinguish the fire

- close all intakes of air for combustion; if possible, cover the chimney. However, the smoke must not accumulate back in the house

- contact your nearest fire fighting brigade to assess the situation and the necessity to report it as a fire fighting emergency

- do not leave the house until the chimney is burned up; regularly check the chimney temperature and the course of combustion

- contact a chimney service before starting a new fire in the stove to assess the state of the chimney and also contact the manufacturer of the fireplace stove for inspection.

4. Assembly regulations

Warning: All local regulations, including regulations concerning national and European standards for this type of appliances, must be adhered to:

ČSN 73 4230/2004 - Fireplaces with open and closable furnace

ČSN EN 13229/2002+A1/2003+A2/2005 - Built-in heating appliances and open fire inserts for solid fuel

ČSN EN 13240/2002+A2/2005 - Room heaters fired by solid fuel

ČSN 73 4201/2010 - Chimneys and connecting flue pipes - Design, construction and installation of heating appliances

ČSN EN 1443/2004 - Chimneys – General requirements

ČSN EN 13501/2010 - Fire classification of construction products and building elements

ČSN 06 1008/1997 - Fire protection of heating appliances

4.1 General

The fireplace stoves must be installed on a floor with an adequate bearing capacity. If the existing arrangement does not meet this basic requirement, necessary steps must be taken (e.g. using a mat for distributing the load). Make sure that there is enough space for cleaning the fireplace stove, connecting flue pipes and the chimney unless the chimney can be cleaned from other place, e.g. a roof or through doors designed for this purpose.

4.2 Chimney connection

Before assembling the closed fireplace stove it is necessary to calculate that the chimney construction will be suitable for the installed fireplace stove nominal output as far as design, vent size and effective height are concerned.

A suitable chimney (minimum profile, chimney draft, tightness, etc.) is a basic condition for the proper functioning of the fireplace stoves. You should therefore contact a chimney sweeper before installing the

fireplace stove. Chimney values are included in the attached technical sheet. A smoke shutter or a draft regulator should be installed for chimneys with too strong a draft. Such a draft can cause problems during operation, e.g. intensive burning, high fuel consumption and can also lead to permanent damage of the fireplace stove.

The minimum effective height of the chimney for exhaust gas from the stove is **5m** (measured from the hoop to the chimney mouth). The chimney entry must be equipped with a chimney hoop. Consult the vent connection with the vent manufacturer. The vents must lead at least 5cm below the lower ceiling. Connect the flue mouth with the chimney in the shortest possible way so that the flue length is at most 1/4 of the effective height of the chimney (i.e. 1.5m). Connect the flue tube and the knee together with an overlap in such a way that the connections always agree with the exhaust gas flow, or abut using the connection rings. If the connecting piece passes through construction elements with flammable materials, it is necessary to use protective measures in accordance with ČSN 06 1008/1997. The norm states that the flue pipe needs to rise to the vents in the direction of exhaust flow with a degree of at least 3°. The tightness and firmness of the joints is crucial. The chimney and stove connection must adhere to ČSN 73 4201/2010. The casing of the chimney must not exceed a temperature of 52°C during the highest operation temperature of the stove. The cross section of the flue pipe vents must not be larger than the cross section of the chimney vent and it must not narrow down in the direction of the chimney. If calculations show that the cross section of the flue pipe and chimney vent could be smaller than the cross section of the exhaust throat of the fireplace stove, the cross section of the flue pipes will be lowered immediately behind the exhaust throat of the fireplace stove, either gradually or at a discrete point. The flexible flue pipe from the materials in accordance with table A.1. may only used in places where it may be checked in accordance with 7.2.1 ČSN 73 4201/2010, and unless the flue pipe leads through an open air its checkability must be ensured in accordance with 7.2.5 ČSN 73 4230/2004. A vertical flue pipe may only be used in the cases listed in 8.3.4 and 8.3.5 ČSN 73 4230/2004.

The fireplace stove may be connected to a shared vent with a gas appliance for multi-layer chimneys in accordance with ČSN 73 4201/2010.

When installing ROMOTOP spol. s r.o. fireplace stoves in the FRG in compliance with article 6.2.2 of the **DIN 18896** norm, the fireplace stoves can be connected to a shared chimney.

4.3 Connection of fireplace stoves with exchanger to the heating system

system and warm service water container

When installing the warm water system, it is necessary to adhere to the appropriate regulations listed in the following norms and to respect the requirements on heat systems in buildings: ČSN 06 0830/2006 – Safety devices for central heating and heating of service water ČSN 06 0310/2006 – Project and assembly ČSN 06 0320/2006 – Preparation of warm water – design and project ČSN EN 12 828/2005 – Designing warm water heat systems ČSN EN 13 240/2002+A2/2005 - Room heaters fired by solid fuel ČSN EN 13 229/2002+A2/2005 - Built-in heating appliances and fireplace stoves for solid fuel

Warning: Article 3 par. 2.3 council regulation no. 97/23/EC "Pressure equipment" (corresponds to government regulation no. 26/2003 - previously government regulation no. 182/1999) adjusts the need to equip fireplace stoves and fireplace inserts with exchangers (with manual stoking of solid fuel for the production of warm water with temperatures below 110°C) with a safety fuse against overheating. If the fireplace stove with exchanger or fireplace insert with exchanger is not equipped with this fuse, then it is not required on the product!

The fireplace stove exchanger needs to be connected with the warm water system via a screwed joint. To this end the fireplace stove exchanger is equipped with screwed outlets. If you require off-season infrequent heating only in the room containing the fireplace stove, it is necessary to "redirect" the exchanger output so that other heat appliances do not overheat (e.g. water container). We always recommend connection with an

Warning: Always have a specialist company take care of the project and assembly of your warm water

accumulation tank to ensure comfortable heating and a maximal utilization of the heat energy. Heating systems with forced circulation can be secured against overheating e.g. via an open expansion tank or cooling loop. In case of electricity outage it is recommended to use a backup supply for the circulation pump. We recommend equipping heaters with thermostatic heads (especially in the area where the fireplace stove is located).

Heating systems with forced circulation are susceptible to overheating, most often due to power outages. If the circulation pump stops, the water temperature in the exchanger will start to raise rapidly, since the heat is not being drained anymore. Romotop strongly recommends installing one of the systems for preventing the overheating of heating systems.

Recommended systems for preventing the overheating of heating systems:

- Cooling loop in case of a power outage and if the exchanger heats up above a safe bound, the cooling vent will release cold water from the water supply into the loop located in the exchanger. The cold water will drain the heat from the exchanger into waste water (see Connection chart with cooling loop).
- **DBV cooling valve** in case of power outage and if the exchanger heats up above a safe bound, the • overheated water is drained as waste water and cold water is released simultaneously into the heating system (see Connection chart with DBV cooling valve).
- **Backup generator** allows the pump to operate for a short while during power outages to let the • fireplace insert to cool off.

Warning: The cooling exchanger (loop) and the DBV cooling valve are designed to fully protect the exchanger against overheating. Its proper operation and connection is conditioned by a cold water intake with a permanent minimal pressure of 2 bars and temperature of up to 15°C, i.e. the water supply must not depend on power outages (preferably the water system). Cooling water from the cooling exchanger is drained as waste water.

Securing the heating system against high pressure

We recommend using a safety valve for securing the heating system against high pressure. It is placed on the hot water outlet from the exchanger. No closable piping may be installed between the exchanger and the safety valve. The maximal distance of the safety valve from the source is 20xDN. The safety valve should be easily accessible to allow regular inspection of functionality.

Installation of this safety value is a required condition for the warranty of fireplace stoves with a warm water exchanger.

Protecting the exchanger from low-temperature corrosion

To prevent the creation of condensate on the walls of the exchanger, it is necessary to always equip the heating system of warm water fireplace stoves with a thermostat mixing valve, which keeps the water temperature at the inlet to the exchanger at a minimal value of 65°C. Protection from low-temperature corrosion will increase the service life of the exchanger. To improve the heat-up and combustion phases in forced systems, we recommend installing a switchable thermostat for the pump.

Installation of thermostat exchanger valve is a required condition for the warranty of fireplace stoves with a warm water exchanger.

Warning: The outlet vent must be installed in the lowest part of the heating system.

Warning: The fireplace stove with exchanger may not be used without connection to the warm water system and when not filled with the heat carrying medium, i.e. water or frost-resistant filling recommended for this purpose. These fillings must adhere to norm ČSN 07 7401/1992 (Water and steam for thermal energy equipment) to keep a long service life.

For more information please see the information sheet available for download at www.romotop.cz: Construction readiness for Romotop fireplace stoves, or contact us directly on our Romotop service line (see www.romotop.cz).

5. Operation manual

5.1 Fuel

It is only allowed to burn wood in fireplace stoves in accordance with law 201/2012. To reach the nominal parameters of the heater, we recommend using dry logs with a diameter of 5-8 cm and length of 20-30 cm and with a humidity below 20% (ideally 10%). Oven wood and chopped pieces of wood should be used only when starting the fire. Recommended humidity can be obtained by storing the chopped logs for at least two years in a ventilated shelter.

The fireplace stove should be heated to a nominal output stated in the technical sheet, i.e. the burning of a given amount of allowed fuel per **1 hour**. Long-term excessive output could damage the fireplace stove.

Never use flammable fluids, coke, coal or any of the following types of waste as fuel: chipboards, plastics, plastic bags, soaked wood or wood-shavings, saw-dust or pellets!

!!!Burning of the abovementioned material not only highly pollutes our environment but also damages the fireplace stove and the chimney!!!

5.2 Starting the fireplace stove for the first time

Before the first use all remaining stickers must be removed, all accessories must be taken out of the ashpan or fireplace and the same applies for the transport safety pins. Check that bulk shutters for directing the draft, chamotte tiles and the barrier are set correctly (as they might have slipped from their correct positions during transport or installation). Repair any defects you might find in setting, otherwise the proper functioning of the heater is endangered. After setting the fireplace stove, connecting it to the chimney and, if need be, connecting the exchanger to the warm-water set and filling it with a heat-carrying medium, start heating slowly and continue for at least one hour. Leave the stoves and ashpan doors open (approx 1-2mm) before and during the first heating in order to prevent the sealing material to mix with the paint. The fireplace surface is covered with heat-resistant paint. During the first heating, after becoming temporarily soft, the paint will eventually become hardened. During the soft phase the paint surface is more vulnerable to being damaged by a hand or other object. During the first heating the fireplace stove should be "heated up" with a small flame, burning only a small amount of fuel with a lower temperature. All materials must get used to the heat load. You will prevent cracks in chamotte bricks, damage of the paint or deformation of the insert materials by a careful first heating. Hardening of the paint on the fireplace stove might be accompanied by a temporary smell, which will disappear after a while.

Make sure the room is properly aired when burning the paint. Furthermore, ensure that no small animals or birds are present in the room containing paint exhausts. We also recommend turning off aquariums air intakes during the first heating.

5.3 Kindling and firing

1. <u>Fireplace stoves with grate</u> - first put crumpled paper into the chamber and then lay chopped wood on it. You can also used the solid fire-lighter **PE-PO** to start the fire. After starting fire, let it burn freely with all air regulation elements open. **It is forbidden to use flammable liquid (oil, petroleum, etc.) for starting fire!** After the fire begins to burn and the draft is strong enough, bigger logs might be added without the danger of smoke. Continue stoking the amount of fuel determined based on the nominal output of the fireplace stove.

2. <u>Fireplace stoves without grate</u> - only secondary air is used for burning; therefore wood logs need to be stoked first, then chopped wood and finally small cuttings and paper. After starting fire, let it burn freely with all air regulation elements open. **It is forbidden to use flammable liquid (oil, petroleum, etc.) for starting fire!** After the fire begins to burn and the draft is strong enough, bigger logs or wood briquettes might be added without the danger of smoke. Stoke no more than the amount of fuel determined based on the nominal output of the fireplace stove.

Fuel consumption is always stated in the technical sheet. Burning intensity is regulated by air intake controls or, if a smoke shutter is installed, by limiting the draft in the chimney. Larger amount of fuel or a strong draft and air take might cause overheating and damage of the fireplace stove. Too weak draft leads to glass blackening or to a smoke escaping into the room when opening the door and stoking fuel.

<u>Warning</u>: Fireplace doors must always be closed, with the exception of the first heating, stoking fuel and removing ash. When the fireplace stove is not in operation for a longer period of time, it is necessary to check that the flue pipes, chimney and combustion chamber are clear. In general, the heating up and cooling of the fireplace insert is accompanied by a specific sound; this is intended.

5.4 Stoking fuel

In order to prevent smoke escaping into the room when stoking fuel, please follow the following procedure: Approximately 5 or 10 seconds before opening the fireplace doors open the air intake regulators and then only slightly open the stoking doors, wait for few seconds for the exhaust gas to get sucked into the chimney and only then fully open the door. When opening the stoking door, a special attention must be paid to the danger of hot fire-brands falling out. After stocking fuel, close the door again. After the fuel starts burning (with clear fire), return the regulator back to its original position. The amount of stoked fuel should correspond to an hourly consumption value for the concrete fireplace stove (see the technical sheet). Overheating can permanently damage the fireplace stove construction.

<u>Warning</u>: To prevent exhaust gas escaping into the room during stoking add fuel after its burning down on the glowing base.

5.5 Operation during the transition period

The chimney draft (sucking exhaust gas from the fireplace stove) might be weaker during the transition period, i.e. when the outside temperature is higher than 15°C, during rainy and humid days or during gust airs. During this period the fireplace stove should be operated with the minimum possible fuel so that the fire, as well as the chimney draft could be improved by opening the air intakes.

<u>**Tip:**</u> During this period a so-called atmospheric plug can be created in the chimney mouth due to the draft conditions. The plug can caused smoke escaping into the room when lighting fuel. We recommend letting a piece of paper burn down preferably in the upper part of the combustion chamber before lighting the kindling. This seemingly negligible smoke is enough to break through the atmospheric plug. Afterwards you can freely light paper (or solid fire-lighter PE-PO) and be sure that even a humid chimney is clear.

In this period it is also possible to use the same lighting method as for the fireplace stoves without grate (with

no ashpan).

5.6 Ash removal

Make sure that the ashpan is cleaned when being half full in order to prevent the ash reaching too close to the grate and thus damaging it. At the same time the ash would block the intake of air required for burning. Removing ash from the ashpan should be carried out when the fireplace stove is cold and preferably ready for the next heating. A vacuum cleaner designed for cleaning ash with a filter for small filth can be also used for cleaning the cold ashpans or heater without ashpans. Ash from burnt wood can be used for composts or fertilizing. Store the ash in closed non-flammable containers.

<u>Warning</u>: Make sure that the ash does not contain any glowing remains of wood that could cause fire in the waste container.

<u>Warning</u>: For some fireplace stove types the ashpan is located in a basin under the grate and cannot be removed from the side. The ashpan can be removed only when the heater is cold and not in operation. The ashpan is accessible after lifting the grate.

Be careful when removing hot ash!

5.7 Cleaning the glass

The cleanliness of the window is influenced not only by the using of suitable fuel, providing sufficient air intake and chimney draft but also by the method of operating the fireplace stove. In this respect we recommend stoking only one layer of fuel and distributing the fuel as evenly as possible and as far from the glass as possible. This also applies for briquettes (the distance between them should be 5 to 10 mm). If the glass becomes dirty, try increasing the burning intensity by opening the air intake and the glass will clean itself.

Sooty windows can be cleaned in cold state using newspapers or wet cloth dipped in wood ash, alternatively using a special cleaning agent designed for fireplace stoves. While cleaning the glass with chemical detergents, prevent them from soaking into the insulation cord between the glass and the door frame. Do not use cleaners that could scratch the window!

6. Cleaning and maintenance

Your fireplace stove is a high-quality product and no significant defects will appear during normal operation. The fireplace stove and exhaust pipes should be checked thoroughly before and after the heating season.

Clean the fireplace stove only after it cools off!

6.1 Cleaning the fireplace stoves / disassembly of chamotte

All sediments in flue pipes and combustion space must be removed during cleaning. Repair, ideally by removing, all fallen-off parts of the chamotte lining. The integrity of the chamotte lining must be monitored also during the heating season. Spaces between individual chamotte fittings serve as a heat dilatation preventing cracking of the fittings and must not be filled by filling material as was usual with older types of solid fuel heaters. **Cracked chamotte fittings are still functional until they fall out!** Bulk shutter for directing the draft, if used, should be removed during cleaning (this enables easier access to the space above them). The fireplace stove cleaning (with the exception of glass) should be done without water cleaner, i.e. using only vacuum cleaner or steel brushes. Any modifications of the fireplace stove are unacceptable. Use only spare parts approved by the manufacturer. Disassembly of chamotte (see the Chamotte chamber). From time to time the friction areas of the door hinge and the closing mechanism should be oiled using carbonic fat or grease designed for high temperatures. Close the fireplace stove with corresponding slide valves when not in operation.

6.2 Cleaning the warm water exchanger

The exchanger vents should be cleaned as required, at least once in 3 week by attached steel brush. The degree of fouling is influenced by the fuel humidity, methods of operating (e.g. economic operation - closing air intakes regulators) and by the connection to the heating system, see chapter **4.3**. Access to the exchanger vents is located above the combustion chamber.

Shutters for regulating the draft, if used, must be removed.

6.3 Cleaning the chimney

Each user of a solid fuel heater is obliged to ensure regular checkups and cleaning of the chimney in accordance with the government regulation no. 91/2010 from 1^{st} March 2010 supplying regulation no. 111/1998 Coll.

7. Disposal of covers and the discarded product

Packaging and the discarded product should be liquidated in accordance with law no. 125/1997 Coll. and related regulations.

Packaging:

a) wooden parts can be used for heating

b) plastic package is to be placed into a container for sorted waste

c) screws and handles are to be taken to a waste collection station

d) bag with the separator of air humidity is to be placed to separated waste

Discarded product:

b) dismantled glass is to be placed into a container for sorted waste

b) sealing and chamotte boards are to be placed into communal waste

c) metal parts are to be taken to a waste collection station

8. Repairs and warranty claims

Service and warranty repairs are provided directly by the manufacturer or through the sales representative. Warranty certificate, fireplace stove purchase receipt and transfer protocol must be presented when filing a claim. It is in the purchaser's interest to demand a legibly filled-in warranty certificate and transfer protocol upon purchase. The service department will decide about the method and place of repair after inspecting the defect; furthermore, proposed measures will be consulted with the fireplace stove owner. Relevant provisions of the Civil Code and the warranty regulations apply for the fireplace stove replacement or termination of the contract of purchase.

WARRANTY CERTIFICATE

ROMOTOP spol. s r.o. WARRANTY AND CLAIMS CONDITIONS VALID FOR THE PURCHASER (CONSUMER)

- 1. The following warranty and claims conditions are processed in accordance with relevant provision of the Civil code and the Consumer protection act.
- 2. The seller is obliged, if requested by the consumer, to issue a purchase receipt or service receipt including date or purchase or service, type of product or service, price of product or service, together with identification information of the seller, i.e. the name and surname, company name, alternatively their identification number, address or place of business, unless determined otherwise by a special legal regulation.
- **3.** Warranty period granted for this product is **24 months**. The warranty period begins upon accepting the product by the consumer. For products that need to be put into operation by an authorized or professional company the warranty period begins only after the product is put into operation, provided the purchaser ordered the given company to put the product into operation within 3 weeks from accepting the product and provided all necessary cooperation.
- 4. Warranty applies to all manufacturing defects and material defects originating provably during the warranty period.
- 5. Warranty does not apply to wear and tear and further to:

-defects caused by unsuitable or unprofessional service or modifications, connecting to insufficiently sized chimney or chimney with low draft, inadequate handling or use, failure to adhere to conditions of use and maintenance (see Operation manual).

- defects caused by mechanical damage

- when the product is stored in humid and unsheltered place, or is used an environment other than the home environment.

- defects caused by natural disaster, weather conditions or violent damage.
- when warranty seals or plagues with serial numbers are damaged.

-damage during transport (in case of transport at your own risk). When transported via an external transportation service - any damage must be dealt with on the spot.

- if the information on the warranty certificate or purchase receipt differs from the data on the manufacturer plague.

- 6. Extended warranty period does not apply to expendable material used for the repair or exchange of the stove part.
- 7. Warranty must be claimed at the seller, where the product was purchased. However, if the warranty certificate states a different business for the repair, which is closer to the seller or to the purchaser, the purchaser is to claim the warranty at the business designated for the repair. The business designated for the repair is obliged to perform the repair within a time limit arranged between the seller and purchaser.
- 8. The seller is obliged to issue a confirmation including the date of claim, subject of the warranty and the required method of settling. Furthermore, another written confirmation must be issued within 30 days on performing the repair, date and method of settling, including confirmation on performing the repair and its duration, alternatively a written explanation of warranty refusal. This obligation applies other subject designed for the repair.
- 9. Within the first 6 months from the purchase the warranty claim will be treated as a contradiction with the contract of purchase in accordance with § 616 of the Civil code. In months following afterwards the warranty claims will be regulated by § 622 of the Civil code, depending on whether the defect is removable or not.
- **10.** Warranty claims are only accepted and processed for the purchaser.
- **11.** When transferring items for warranty, the purchaser is obliged to inform and eventually document the type label of the product and a detailed description of the defect (e.g. in which mode and how the defect manifests, how long after combustion, description of operation of the item before the defect etc.).
- **12.** When applying the warranty, the purchaser is obliged to prove that the product is being warranted at its seller and that the warranty period has not expired. The most suitable documents in this regard are: - sales document
 - confirmed warranty certificate
 - confirmed transfer protocol
- 13. Other procedures not adjusted in these warranty and claims conditions follow the appropriate provisions of the Civil Law and Consumer Protection Law.

Realization ad	dress:
Contractor (p	erson responsible for construction):
List of docum	ents:
List of defects	and outstanding work:
List of variation	ons from the project (the approved documentation):
Construction]	permit no.:
Construction	permit no.: Issued by:
Construction] Date: Technical sup	permit no.: Issued by: ervision of the investor:
Construction Date: Technical sup Date of comm	permit no.: Issued by: ervision of the investor: encement of transfer:
Construction Date: Technical sup Date of comm Date of termir	permit no.: Issued by: ervision of the investor: encement of transfer:
Construction J Date: Technical sup Date of comm Date of termin Date of compl	permit no.: Issued by: ervision of the investor: encement of transfer: nation of transfer: ete clearing of the workplace:
Construction Date: Technical sup Date of comm Date of termin Date of compl Warranty beg	permit no.: Issued by: ervision of the investor: encement of transfer: nation of transfer: ete clearing of the workplace: ins on:

Contractor (signature):	Date:
Purchaser (signature):	Date:

TRANSFER PROTOCOL

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