HAAS + SOHN

Fireplace stove

General operating, assembly and maintenance instructions
Fireplace stove

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/haassohnrukov

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Please read through these operating instructions carefully. You will be informed about the function and handling of this stove and you will also save fuel and conserve the environment by heating correctly.
The attached **equipment sheet** is part of these operating instructions.

Notes in the text

Of utmost importance there are the notes entitled **WARNING**. The notes entitled **WARNING** advise you on **serious danger of damage to the heating device or of an injury.**

The note entitled **Notice** advises you on possible damage to your heating device.

The note itself calls your attention to the information important for the operation of your heating device in general.

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1. Technical specifications

Fireplace stoves are designed to heat living rooms, recreational facilities and workplaces intended for increased thermal comfort enhanced with a picturesque sight of flames. A fireplace stove should not be the only source of heating in the building.

1.1. Heating principle

Modern stoves are designed for combustion of wood, eco-briquet and, in some cases coal briquettes using a burn-through system, which guarantees the best combustion conditions.
Warming up the air in the room and creating cosy climate (thermal comfort) is achieved mainly by convection heat and partly by radiant heat. Thanks to this system even very cold rooms and rooms that have not been heated for a prolonged period of time can be heated up quickly. Convection heating works on a principle of the room air entering the stove at the bottom and getting heat up when raising upwards in the combustion chamber, which is double-jacketed, and then the air flows through the openings in the upper part of the stove back to the room. Radiant heat is obtained from the surfaces of the stove (metal, ceramics, glass). Considering the construction, the glass door is the largest source of radiant heat.

1.2. Construction design

The stoves are welded from 2 to 5 mm thick steel sheets. In the middle part of the stove, the combustion chamber can be closed by a door, which is equipped with a self-closing mechanism for some stove types. The door is fitted with a special large-area glass that can withstand temperatures up to 800 ºC.
The internal space of the combustion chamber is laid out with heat and strength-resistant fittings. Fittings are not bonded with any pargeting material, which could get damaged due to thermal expansion. The flue gas baffles located in the upper part of the stove directing the gases into the exhaust outlet can be both solid or bulk (loose). A bulk flue gas baffle can also serve as a holder for chamotte fittings. A simple, solid cast iron grate is located usually in the lower part of the combustion chamber A protection bar against dropping and sliding of fuel (wood etc) on the glass door is located in front of the grate. There is a space for the ash pan under the grate. The space at the bottom of the stove can be used as a fuel storage.
The stove jacketing can be made of steel sheets, ceramic tiles, thick-walled tiles or natural stones. The steel structure of the stoves, including sheet metal tiles, is protected by a special refractory paint.

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! CAUTION

Fireplace stoves do not have the character of an ever glow heater and are intended for periodic - discontinuous (temporary) operation.

2. Combustion process

2.1. Amount of fuel and setting the combustion process

Combustion of wood, eco-briquettes and some types of coal briquettes in fireplace stoves is a burn-through system, which means the combustion takes place throughout the fuel load at once. In order to ensure optimal conditions for easy kindling and subsequent flame-up, it is necessary to let a sufficient amount of air to get under the burning fuel via the grate - that is marked as a **primary** air supply, which is adjustable. With the increasing temperature of the flue gases, the gas components of the fuel begin to be released which cannot produce any thermal energy without an additional air supply, thus it is necessary to bring additional air up to the level of the flame height, where the process of combustion of these gaseous components can proceed further, the need of **secondary** and **tertiary** air supply is increased, on the other hand the necessity of primary air supply gets decreased. Secondary air supply, which is generally adjustable, both improves the combustion

process and **helps to automatically clean the door glass**. Tertiary air is designed to improve the overall combustion process, it is usually fixed (not adjustable). With the correct amount and ratio of the air supplied to the correct locations of the combustion chamber, combustion efficiency gets increased and also the emission of harmful gases into the air is reduced. The layout of the air supply regulators is shown in the diagram in the technical documentation, which is included in every delivery of fireplace stove.
Krbová kamna již dnes dosahují účinnosti spalování až 85% a mohou být zařazena mezi špičkové výrobky.
Nowadays, fireplace stoves achieve combustion efficiency of up to 85 % and can be ranked among the top products. The attained heat output of the heater is dependent on the amount of burned fuel over a certain period of time, its quality and the efficiency of the combustion process. According to **Table 2**, you can get an idea of the achievable heat output for 1 kg of burned fuel wood per hour at 20% humidity. Furthermore, the increased moisture in the fuel wood also significantly decreases the caloric power.
The heater's adjustability was tested in the range of 30-100% of rated output within the conditions of the test room. The heat output was being adjusted using the chimney draft and amount of fuel. In practice, the stove can be adjusted by air supply regulators, especially by the primary air supply. Precise adjustment of the combustion process by regulators cannot be clearly defined. It is influenced by a number of factors - fuel humidity, fuel type, chimney draft, outdoor pressure conditions, etc. Therefore, the combustion process (flame intensity and quality) must be governed by the current conditions. The ability to efficiently adjust the combustion process will increase with your experience in using the product. A more detailed table with settings for air supplies can be found in the technical documentation, which shows the actual values that have been tested in the given test conditions at the State Testing Laboratory. Table 1 below serves only as general information for air supply adjustability.

fuel	**amount of fuel**	**primary air supply**	**secondary air supply**	**tertiary air supply**
		adjustable	adjustable	not adjustable
wooden logs, wooden briquettes	2 - 3 logs (about 2 - 3 kg), 2 - 4 pcs (about 2 - 3 kg)	closed or opened according to the given combustion conditions	fully open	fix
coal briquettes	2 - 3 pcs (about 2 - 3 kg)		½ open	fix

Table 1

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Tips for burning wood:

- After each kindling, leave the primary air supply fully open for prolonged period of time, so you get better fuel burning results.
- Prior to mending the fuel, it is advisable to fully open the primary air supply.
- When using wooden logs, make sure that the wood is dry with a maximum humidity of 20 %.

Tips for burning coal briquettes:

- For optimal combustion, put the briquettes directly to the grille vents, making the fuel burning better.
- Make sure that the amount of fuel matches the heat output you desire meaning that only a few briquettes are sufficient to maintain the heat, otherwise the stoves will be thermally overloaded.
  The caloric power of coal briquettes can reach up to 6 kWh/1kg, about 40% more than wood!

2.2. Fuel

In fireplace stoves it is possible to burn wooden logs, briquettes from pressed wood and in some types also coal briquettes. The humidity of the wood intended for combustion should be less than 20 %, optimally 10 %. The rule is, the lower the water content in the fuel is, the higher the caloric power is. Recommended wood moisture is achieved by storing the wood supplies for at least two years in a ventilated shelter. The water content in the briquettes must be defined by the manufacturer of the briquettes. Briquettes must be stored in a dry environment, otherwise there is a risk of disintegration. The recommended size of wooden logs for storage and combustion should be 3-6 cm in diameter and 20-30 cm in length. **Fire-burning stoves are forbidden to**

burn coal and chark. Never use flammable liquids or wastes such as: wallpaper, chipboard, plastics, treated wood, shavings or sawdust as fuel. Combustion of such materials will not only harm the environment but will also shorten the life of the stove, as well as cause damage to the stove/chimney.

Note

The bark, which is found on wooden logs, is of course also possible to burn.

Caloric power of some types of wood at 20% humidity

Type of wood	Caloric power kWh/m³	Caloric power kWh/1 kg	Weight kg/m³
Spruce, Fir	1957	4,0	485
Larch	2461	4,0	610
Pine	2280	4,0	565
Oak, Beech	2743	3,8	726

Table 2

3. Operation safety

3.1. General provisions

For the operation and installation of fireplace stoves, the fire protection principles contained in ČSN 06 1008 must be observed.
The appliance may be used in normal - indoor environments. When changing the surround environment, which may occasionally create a risk of fire or explosion (e.g. when gluing linoleum, PVC, painting, etc.), the stove must be put out of operation prior to such risk is created. Furthermore, the stove can only be used after a thorough ventilation of the room preferably by draft.

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WARNING

The stove must not be set up to be operated jointly with the home's air conditioning and ventilation units.

Note

Exceptions:
RLU certified appliances can also be operated with extractor hoods, vented tumble dryers and air conditioning and ventilation units if the stove has also been connected to a balanced flue.

3.2. Safe distance between the stove and combustible materials

When installing a fireplace stove in the area where flammable objects of B, C1 and C2 class (Table 3) are present, a safety distance from the front side (respectively from the side glass areas) of **800 mm** and **200 mm** in other directions must be maintained. If the stove is installed in a room with flammable C3-class objects, these distances must be doubled. For reference see the **Appendix 1**. **The critical distances for the installation are shown on the product label.**

3.3. Safe distance between the flue pipe and combustible materials

The safe distance from door frames and similar building structures made of flammable materials, also pipe installation including insulation, is at least **200 mm**. And from other flammable building structures at least **400 mm** (ČSN 06 1008). For reference, see Table 3. **The actual classification can only be obtained when a proper flammability test required for this selected product has been performed (ČSN EN 13501-1).**

3.4. Instructions for save operation

No flammable liquids may be used for kindling and actual combustion! Furthermore, it is forbidden to burn any plastics, wood materials containing chemical binders (e.g. chipboard etc.) and also unsorted household waste with plastics residues etc.
The stove must only be operated by adults! Do not let children near the stove without supervision. Surfaces of the stove, especially glass surfaces, can reach extremely high temperatures, touching these surfaces may cause severe burns. The stove requires occasional service and supervision when used regularly. The delivery also includes safety gloves for handling the air supply regulators and glass door. Do not put any flammable objects on the stove during operation and as long it is still hot. Do not place any objects containing cold materials or liquids into the hot furnace with ceramic tiles, it may cause damage to the tiles.
Take extra care when handling the ash pan and removing hot ash, as there is a risk of burns. Hot ash must not come into contact with flammable objects - e.g. when disposing of into municipal waste.
The stove may be operated in accordance with this manual only. No unauthorized modifications to the stove are allowed.

Information on the degree of flammability of certain building materials

Flammability of building materials and products	Classification of building material flammability
A = incombustible	granite, sandstone, heavy porous concrete, bricks, ceramic tiles, special plasters
B = hardly combustible	acumin, heraklit, lignos, basalt felt
C1 = heavily combustible	deciduous wood, plywood, werzalit, hardened paper, umakart
C2 = moderately combustible	woodchip boards, hardboard, cork slabs, rubber, flooring materials
C3 = easily combustible	wood fibre boards, polystyrene, polyurethane

Table 3

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4. Installation of fireplace stoves and their connection to chimney

CAUTION

When installing fireplace stove, all local regulations, including regulations on national and European standards for this type of appliance, must be observed.

4.1. Connecting the stove to the chimney orthe flue liner

The connection of a fireplace stove to a chimney may only be carried out with the approval of a chimney-sweeping company in accordance with ČSN 73 4201 or according to valid regulations of the country where the stove is actually being installed. For reference see the **Appendix 2**.

In order to ensure a proper operation of the stove it is necessary to guarantee a sufficient chimney draft in the flue pipe. Data for the minimum draft is always listed in the technical documentation for the relevant stove type. Failure to observe the recommended chimney draft can cause permanent damage to the construction of the stove. With low chimney draft, the glass becomes blackened, the heat output is reduced and the smoke pipeline gets clogged. Flue gases may escape into the room when mending the fire. For this reason, we recommend regular chimney inspection by a chimney company according to ČSN 73 4201 and regular maintenance of the heater.
In cases where the chimney draft is too high and exceeds **20 Pa**, it is advisable to install a suitable chimney flap (e. g. a smoke pipe with a flap). Excessively high drafts can be a source of operating issues, e. g. excessive combustion, high fuel consumption, and can also result in permanent damage to the heater.

Note

It is recommended to connect the stove rear outlet to the chimney through a direct connection with a maximum length of 0.5 m without the use of an angle piece. If any other connection method is going to be used, we recommend consulting with an expert chimney company.

4.2. Connecting the stove to the chimney or the flue vent

We recommend connecting the stove to a separate flue vent. It is possible to connect the stove to a common flue vent only if it follows ČSN 73 4201. The stove cannot be connected to a common vent together with a gas appliance. A minimal fuel vent height is 5 m. In some cases, it is also possible to connect the appliance to a flue vent lower than 5 m only if it is proven by the calculation of the flue path (see chapter 5) that the height is sufficient for the system.

Note

The circular chimney waste-gas flue must have a diameter of at least 140 mm (min. 0.015 m2). For stoves with a smoke pipe diameter of 150 mm, the chimney waste-gas diameter flue must be at least 150 mm.

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4.3. Instructions for installing and securing the flue pipe

Connect the exhaust pipe bell to the chimney using the shortest possible path so that the length of the smoke paths is at most 1.5 m long. Connect the smoke pipes and elbows together tightly with an overlap of at least 60 mm and ensure the joints are always assembled in correspondence with the gas flow. Fix the joint of the flue vent and the exhaust pipe bell with a rivet or pin, as with joints of smoke pipes and elbows. Fit the opening to the chimney with a metal hoop of the appropriate diameter. The flue pipe should rise towards the smoke uptake at an angle of approximately 10°.

4.4. Installing the stove in place (room)

Before installing the fireplace stove, it is necessary to check the load capacity of the floor (ceiling) if it fulfils the load requirements for the given type of stove depending on their weight. The stoves must be installed on a heat insulating, non-combustible base that extends over the stove floor plan **at the sides and back at least 100 mm and at the front 300 mm**. If a sheet metal is used for the base, it must have a thickness of at least **2 mm**. For illustration, see Figure 1.

Note

In order to clean the appliance, flue pipe and chimney, it is necessary to leave sufficient space for easy access.

4.5. Cleaning the heater and the chimney

When connecting the stove to the flue vent, it is necessary to ensure enough room to reach the smoke pipes and chimney properly in order to clean them. Regular cleaning of the smoke pipes and the combustion chamber of the stoves will increase the heater's utility properties. Also, by regular cleaning of the chimney you will prevent the ignition of the solid particles contained in combustion gases settled on the chimney walls.

4.6. Fire in the chimney

If there is a fire in the chimney, the fire in the stove must be extinguished immediately by removing the burning fuel residues with a shovel and disposing them into a suitable non-flammable container and immediately calling the fire brigade (150 line for Czech Republic) or the 112 European integrated rescue system line (911 for the USA, 999 for Britain).

4.7. External combustion air supply

For the combustion process, a sufficient supply of fresh air must be provided. During burning of wood, the stove needs up to 15 m³ of fresh air per hour. In modern buildings, an isolation from the external environment (plastic windows, etc.) can be very high. Issues can be also caused by air exhausters or other heating devices that operate in the same room or area as the stove. Such things significantly reduce the quality of the combustion process, help carbon partials to set in the smoke pipeline and cause smoke leakage into the room when mending the fire. Ensure adequate air supply through open windows or open doors to a better ventilated room. However, it is advisable to provide a ventilation opening for the air supply equipped with an adjustable ventilation grid, which must be secured against blockage.

! CAUTION

The external combustion air routing should take into account the risk of condensate formation and its negative effect on the lifetime of the equipment.
If the stove is not heated, close the external air supply with the controller (position "0") to prevent corrosion of the stove.
Damage to the stove caused by water condensation is not covered by the warranty.

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5. Operating Instructions

5.1. Putting the fireplace stove into operation for the first time

Prior to first commissioning, remove all door glass stickers, all accessories and transport save features which may be found in the ash pan or the combustion chamber. Check if the bulk flue gas baffles, tiles, fittings or protection bar are properly placed (such parts may have slipped from the correct position during transport or installation of the stove) according to the Figure in the technical documentation. If you find any of the parts being not properly in place, correct it, otherwise the function of the heater will be affected.
The surface of the stove is treated with a fire-resistant paint, which cure after the first combustion. Firstly, the paint gets soft, therefore pay attention to the increased risk of damage to the paint by hand or foreign object during this phase, after cooling out the paint hardens definitely. For the first combustion, use less fuel to make fire with smaller flames and the combustion is carried out at lower temperatures. All materials must become accustomed to the thermal load. Cautious firing prevents the tiles, paint and other materials from getting damage. Any odours during paint curing will soon disappear - intensive ventilation is recommended. If pets or birds are present, do not let them stay in the same area as the stove is for the time till the paint is cured.
For stoves where 3-piece split glass is used for the door, make sure that there is no space between the glass pieces, which may occur during transport or operation.

How to remove the gaps between glass pieces in the stove door: loosen screw nuts on glass holders a bit (not entirely). Slightly push the individual glass pieces so the edges of each piece touch each other. Re-tighten the glass holders with the nuts.

5.2. Kindling and firing

For easier kindling, firstly place two to three smaller wooden logs in the combustion chamber, then paper or approved fire-lighter on top of that, continue with brushwood or wood chips, tiny wood pieces, and finally thicker logs. Load the stove with a bigger amount of fuel (up to 2/3 of the lining height). The bigger amount of fuel provides a sufficient amount of combustion time to warm up the chimney to ensure proper operation. Open the primary air supply to the maximum. Sometimes it is advisable to adjust the secondary air supply for easier kindling. It is necessary to close the door when fire is burning.
Once the fuel burns sufficiently, adjust the air supplies for a milder combustion. See provisions in the technical documentation or the Table 1 for reference how to adjust the air supplies sufficiently.
For taping down the ash from the combustion chamber into the ash pan, use the poker bar or the movable grate system, if the stove is equipped with one.

CAUTION

The combustion chamber door and the ash pan door (if used) **must always be closed**, except for kindling, mending the fire and ash removal.

CAUTION

Always check the state of the smoke pipeline, chimney and combustion chamber prior to kindling, if the stove **has not been used for a prolonged period of time**.

5.3. Mending the fire

To prevent leakage of flue gases into the room during re-fuelling, it is advisable to: open the primary air supply for approximately 5 to 10 seconds before opening the stove door, then open the stove door slightly, wait for a few seconds so the chimney soaks up the gases, and then open the door fully. When opening the stove door for re-fuelling, it is always necessary to increase attention, there is a risk falling out of burning pieces of wood. Close the door again, after re-fuelling. When the fuel is burning sufficiently (no sooty flame), return the air supply to the original position. During mending the fire, make sure the fuel does not exceed the level of the chamotte (vermiculite) lining of the combustion chamber. The amount of fuel should correspond to the hourly consumption of a given heater (see technical documentation). Overheating may result in permanent damage to the stove structure.

Note

Excessive leakage of the flue gases into the room when mending the fire can be avoided if you re-fuel after the fuel is burned into the hot base.

5.4. Glass cleanliness

The cleanness and transparency of the glass is dependent on the usage of suitable fuel type, sufficient air supply (**especially from the secondary air supply**) and chimney draft, also the way the fireplace stove is operated. In this regard, it is advisable to place only one layer of wood in order to ensure that the wood is distributed evenly over the furnace and is as far from the glass as possible. This also applies to briquettes (a distance between them of 5 to 10 mm). In case the glass gets dirty during firing, it is recommended to increase the burning intensity by opening the primary air supply, which usually clean the glass.

5.5. Operation during transition periods and under degraded climatic conditions

In the transition period, respectively, at higher outdoor temperatures above 15 °C, on rainy and damp days, in the event of severe winds, the chimney draft may be aggravated (draft from the stove), which causes the flue gases are not completely drained. Therefore, the fireplace stove must be operated with the smallest amount of fuel during this period so that combustion and chimney draft can be controlled by adjusting the air supplies.

5.6. Changing the blank flange with the exchanger

For some types of fireplace stoves, the so-called blank flange is screwed into the stove structure, which at the same time serves as a flue gas baffle. These stove types can be supplemented by a hot water exchanger with the option of connecting radiators for heating neighbouring rooms or a water heater. The heat exchanger is supplied as a separate accessory with detailed installation instructions. Connecting the heater to the stove should be carried by a qualified person only.

CAUTION

Fireplace stove fitted with a heat exchanger cannot be operated without connection to the hot water supply and without any water or antifreeze content.

5.7. Carrying out the ashes

Depending on the length and intensity of heating, it is necessary to tap down the ash in to the ash pan using a poker bar or the grate system (if the stove is equipped with one).
Make sure that the ashpan isn't overfilled, as this could prevent the supply of air under the grate and cause problems with ignition and burning of the fuel.
The ashes are best taken out when cold, in preparation for the next burning period. Care must be taken to ensure that the combustion chamber is properly cleaned. Accumulation of ash in the combustion chamber can cause damage to the lining.
Ashes from burnt wood can be used in compost or as fertilizer.

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CAUTION

Before emptying the ash pan, make sure it does not contain hot fuel residues that could cause a fire in the waste container.

6. Cleaning and maintenance

6.1. Cleaning the heater

It is necessary to clean the fireplace stove in a cold state at least once a year (after the heating season). Also remove smoke deposits in the smoke pipeline, combustion chamber and flue gas baffles. Repair, preferably by replacing, all broken parts of the furnace lining. The state of the lining should be observed even during the heating season. The gap between tiles serves as a thermal dilation preventing fittings from cracking, and it is inappropriate to fill the gaps in any way (e. g. pargeting material) as it used to common in older solid fuel heaters.
Cracked fittings do not lose their functionality unless they completely fall out!
Prior to cleaning, we recommend removing bulk gas baffles from the stove to make it easier to access the space above them. Never use water to clean the painted parts of the heater surface, use a sponge or a soft flannel cloth.

Note

For some stove types, a material so called VERMICULITE is used on the vertical inner walls of the combustion chamber. Some flue gas baffles are made of the same material. This material cannot be repaired. It must be replaced, if necessary. The above-mentioned material has high thermal insulation properties and good crack resistance. It is less abrasion resistant, so we recommend to be more careful when cleaning and re-fuelling.

6.2. Cleaning the glass

For cleaning glass parts, you can use common cleaning agents for cookers and ovens, a dry soft cloth or newspapers, or a special product designed for cleaning glass parts of the fireplace stoves. Only clean the glass when it cold. When applying a cleaner, avoid spillage of the product on the sealing cords (more suitable is the gel consistency, e.g. MEFISTO). The cleaning product may cause damage (hardening) to the sealing causing loss of sealing properties.

6.3. Cleaning ceramics, tiles and natural stone

For cleaning tiles, we recommend using only a dry, slightly moistened cloth. Clean only in a cold state.

6.4. Sealing cords and stripes

For the sealing of door and glass seating surfaces (or other parts of the stove) is used a special glass-ceramic sealing cord (strap) that is able to withstand high temperatures. It is advisable to check the state of the sealing regularly and replace it with new one when sealing properties are gone.
The new sealing will settle down after a certain amount of time and therefore it is recommended to check the tightness of the glass in the door structure after approx. 1 month of operation and tighten the glass holders if needed.

6.5. Spare parts

If necessary, use only original spare parts recommended by the manufacturer, see **paragraph 10.3.** recommended spare parts. Identify the spare part you need using the technical documentation supplied with the stove.

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7. Problem, Cause, Solution

Problem	Cause	Solution
Combustion is not satisfying or there is a smoke during the combustion or re-fuelling.	The chimney or flue pipe is poorly sealed ("fake" air is being sucked in).	Let the chimney check (e.g. seal the chimney door). Properly connect the smoke pipes or replace the damaged ones.
	Insufficient chimney draft.	Consult the problem with a chimney sweeper (stove fitter) and take adequate measures e.g. to clean the chimney, remove flue pipe adapters, increase the chimney length, let flow enough air into the room.

	The door of another furnace, connected to the same chimney, is open.	Close that door.
	Chimney cleaning openings are open.	Close these openings.
	Device, flue pipes are dirty, respectively clogged.	See chapter **6.1. Cleaning the heater.**.
	Insufficient fresh air supply.	See chapter **4.7. External combustion air supply.**.
	Aggravated outdoor climatic conditions.	See chapter **5.5. Operation during the transition period**.
	Bad fuel was used.	Use the correct fuel, see chapter **2.2. Fuel.**.
Fire cannot be kindled.	Fuel is badly loaded. The amount of fuel is too little.	For proper kindling and subsequent firing, load the stove with, see chapter **5.2. Kindling and firing.**.
	Primary air supply is closed.	Open the primary air supply, and adjust the secondary air supply, if needed.
The room is not heated enough.	The demand for heat is great, respectively, stoves have low output power.	Consult it with a heating engineer (stove fitter). Reduce heat loss (e.g. thermal insulation of the building).
	Flue pipes and the stove are dirty.	See chapter **6.1. Cleaning the heater**.
	The chimney draft is too low.	See chapter **4. Installation of fireplace stoves and their connection to chimney**.
	The stoves are not properly operated.	Heater (thermal output power) is not set optimally **2.1. Amount of fuel and setting the combustion process**.
Fireplace stove provides too much heating power.	The stoves are not properly operated.	Heater (thermal output power) is not set optimally, see chapter **2.1. Amount of fuel and setting the combustion process.**.
	The ash pan door is not completely closed.	Close the ash pan door properly.
	Door and ash pan sealing damaged.	Replace the sealing with a new one.
	The chimney draft is too high.	See chapter **4. Installation of fireplace stoves and their connection to chimney**.
The stove produces odours and smoke.	The chimney draft is too low.	See chapter **4. Installation of fireplace stoves and their connection to chimney**.
	The protective lacquer is curing, or the stove is dirty or dusty.	The paint curing (smoke and odour) will soon cease, or, it is necessary to clean the stove when it is cooled down.
The door gets dirty.	The cause cannot always be determined for 100 %, but usually it is: inappropriate fuel, poor combustion	Principle: Depending on the heating method and the fuel usage, the door glass must be cleaned occasionally, see chapter **5.4 Glass cleanliness**.

	setting, poor or moderately impaired chimney draft, loose door sealing.	When burning coal briquettes, the door glass can get dirty more often.
	The chimney draft is too low.	See chapter **4. Installation of fire-place stoves and their connection to chimney**.
	Too much fuel has been loaded in the combustion chamber.	Load the stove with a smaller amount of fuel. **2.1. Amount of fuel and set-ting the combustion process** and **5.3. Mending the fire**.
	The fuel is too wet.	Only use dry fuel, see chapter **2.2. Fuel.**.

8. Most frequent mistakes and questions

8.1. Cracked (loose) lining in the combustion chamber

First of all, it should be emphasized that cracked fittings do not lose its functionality until they completely fall out, so there is no need for immediate replacement! If replacement is needed, you can order these parts directly from a dealer or at the manufacturer's address by entering the type and serial number of your stove and specify the tile number you need to replace (find the number in the include technical documentation).
Replacement procedure: Prior to the replacement of the side wall fittings, remove the top desk and chamotte holders (if used), then remove the damaged fitting. Sometimes it is necessary to remove the grate with fittings on the bottom. Reassembly is done in the opposite way, remember to put everything in the original correct position, as shown in the technical documentation.

CAUTION

Do not the use stove if even a small part of the lining in the combustion chamber has fallen out. There is a risk of burning the stove construction.

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8.2. Broken glass

Door glass is made of special glass-ceramic material with high heat resistance. **Ordinary sheet glass cannot be used!**
Replacement procedure: When replacing the glass, it is not necessary to remove the entire door, only unscrew the glass holders and remove the glass. When reassembling, the whole circumference of the glass must be seated evenly on the door surface. The contact surface between the glass and the door must be fitted with a sealing cord. The sealing cord can be reused, if it is not damaged. Put the holders back and tighten them gently and evenly, so the glass does not break.

CAUTION

Some stove types do not have a sealing around the whole contact surface between the glass and the door! **Do not use the fireplace stove when the glass is cracked! There is a risk of fire.**

8.3. Flue gas baffles

To clean the stoves or replace the furnace lining, remove the bulk baffles (if used, see Technical documentation), that block the access for cleaning or fittings replacement. When removing the baffles, it is

necessary to consider the fact that for some stove types the baffles also serve as fitting holders. In this case, be careful when removing the baffles and avoid possible falling out or dropping and subsequent damage of the tiles. Pay attention to the correct installation of the baffles when reassembling.
Dismantling: Raise one side of the bulk baffle a bit, the other side will tilt down, then move it to the side so it can be removed from the stove.
Reassembly: Reassembly is done in a similar way. Slide the baffle sideways to the desired location and put in place, always check the correct position according to the technical documentation!

8.4. Cracked side tile

During transport, operation and other events, the tiles and metal sheets can get damaged. Tiles, or metal sheets are held in the jacket by a pressure of special clamping springs.
Dismantling: Tap on the tile with your palm to move it to the edge (right or left). Do not let the tiles to fall out and get damaged because of the pressure of the spring. Start the dismantling with the middle tile or with the one which both sides lean against the jacket.
Reassembly: Start the reassembly with the bottom or the top tile. Insert the tile to the desired place (from right or left) and then overpower the pressure of the spring. To overpower the spring pressure, it is best to hold the tile with both hands, then push the tile to fit behind the edge of the jacket and finally move the tile to the correct position with light hits of your palm (sometimes a greater force and hits are required to overpower the spring). Install the tile symmetrically - with the same overlap on both sides of the jacket. Finally, put the middle tile (or the one with both sides leaning against the jacket) in place.

Note

If the tiles fall out during the operation, it is appropriate to increase the pressing force of the spring by increasing the spring tension.

8.5. Changing the blank flange with the exchanger (only for some models)

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Dismantling: unscrew the fastener nuts using an appropriate key and remove it from the stove construction.
Reassembly: Before installing the heat exchanger, clean the contact surface - there may be residues of the original sealing after removing the blank flange. The exchanger must be fitted with an undamaged sealing. Tighten the nuts evenly to ensure tightness over the entire circumference of the exchanger flange.

9. Product liability and service

9.1. General

Providing that all directions and recommendations in the Instructions for Installation, Operation and Maintenance are respected, the manufacturer (supplier), company HAAS + SOHN Rukov s. r. o. provides guarantee for 24- month period from the takeover for parameters and characteristics of the product as specified in relevant technical standards, in the Instructions and the data shown in the nameplate.

9.2. Conditions for guarantee

The guarantee covers free-of-charge repair of the fireplace stove or parts or components (the subject of complaint, if any) providing that the cause of the defect is defective material or craftsmanship.

9.3. Guarantee and post-guarantee service

Guarantee and post-guarantee service is provided by importer companies or contractual partner service institutions.

9.4. Claim rejected

The warranty is not related to damage or defects of the device or its components caused by:

- Contact with chemical substances or physical contact causing damage during the transport; improper storage; erroneous installation or operation in an improper manner (for example, cooling with water, dirt from food, water condensate, etc.)
- Wrong product installed (overheating or under-heating in the room)
- Construction and legal requirements not adhered
- Wrong installation or connections
- Poor or too strong chimney effect (the connections must be in conformity with the standards currently in force)
- Unauthorised alteration or additional modification of the heating system, especially the firing area or smoke flue system
- Unauthorised persons interference (service work by unauthorised persons)
- Instructions for operation not adhered
- Additional built-in accessories or spare parts not manufactured by HAAS + SOHN Rukov s.r.o.
- Use of inappropriate kind of fuel
- Erroneous operation, device overload (e.g. the ashpan door open) resulting in damaged construction (e.g. burnt-through partitions, construction deformation, etc.)
- Unprofessional manipulation, mechanical damage by excessive mechanical force
- Lack of proper maintenance or use of inappropriate cleaning agents
- Force majeure (floods, etc.)

Used stone tiles are purely natural. 100 % natural stones can exhibit deviations and inconsistency in both colour and structure. Obviously, in terms of texture and colour, each piece is original. Perfect accuracy and edge sharpness cannot always be expected with stone tiles. Due to the facts mentioned above, such imperfections cannot be claimed as warranty.

Tiny hairline cracks in concrete parts (such as concrete facings of fireplace sets) are a completely normal phenomenon that can occur during the use of the fireplace. These small cracks can be filled with acrylic sealant, which is included in the delivery. Hairline cracks on concrete parts are not considered a valid reason for a claim.

The occurrence of small hair cracks in the glaze (HARIS) is permissible and is not considered a defect. If thick tiles are used for the veneer of the stove, minor inaccuracies in the size, rectangularity and flatness of the surfaces, the differences in shade and glaze effects are an integral part of this ceramic product.

Specification of technical properties - ceramic stove tiles

Blemishes in appearance on the stove:

- Hair cracks in the surface of the glaze called Haris are not subjected to claims. It is an accompanying phenomenon arising from the firing of stove tiles. Depending on the type of glaze, it is more or less visible.
- The colour of individual orders can show +/- 2 degrees of difference compared to the delivered sample book.
- The colour of individual tiles in one order can show +/- 1 degree in colour difference.
- Finishing operations or spare parts may show +/- 2 degrees of colour difference. The glazed surface may bear a mark on the previous operation, but must not be scratched or otherwise damaged. For example, by breaking the glaze, or by a tangible crack or surface unevenness.
- There may be one visible colour difference or three invisible colour defects on the tile. For example, multi-coloured dots, or a different shade of light shining through the base material.

- One puncture (hole on the glaze) may appear from the front view, one larger puncture and three smaller ones in the side part. (These must be scattered)

All stated values of accuracy and appearance requirements for the manufacture of ceramic stove tiles are significantly stricter than stipulated by the standard ČSN 72 4710 - Ceramic stove tiles; Requirements, test methods and marking.

9.5. How to make a claim

Send a written claim to your sales person, by letter, fax or e-mail. Please specify the product model, year of manufacture and serial number. (the data from the name plate, at the rear)

If you make a claim, kindly provide your address, phone number and description of the defect. Ask the seller for guarantee at the purchase. The service centre shall deal with the problem in shortest time, suggesting the place and time of the service action to the customer.

9.6. How to order spare parts

At any order, kindly specify the type of the fireplace stove, the year of manufacture and the serial number of your product. For the spare part identification, follow the Technical Card (state the name of the part or its ID or position in the drawing).

10. Other

10.1. Accessories included with the stove delivery

Each delivery includes a protective glove for handling the stove, instruction manual with a warranty list, technical documentation and the necessary accessories for the type of heater (see equipment sheet).

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10.2. Special accessories order request

1. Flue pipe with a flap, without a flap ø150 mm and ø130 mm (length 0.25 m; 0.5 m; 1 m)
2. Chimney elbow with an opening for cleaning, without an opening ø150 mm and ø130 mm (90°, 45°)
3. Chimney hoops ø150 mm a ø130 mm
4. Baskets for wood logs
5. Fireplace tools according to special offer
6. Glass cleaners
7. Hot-water exchanger

10.3. Recommended spare parts

Some of the spare parts that can be ordered:
1. Chamotte fittings and VERMICULITE slabs for the combustion chamber
2. Ash pan
3. Door glass
4. Grate
5. Sealing cords
6. Repair paint spray
7. Veneer of the jacket
8. Blank flange
9. Decorative elements (rods, loops, regulators)

10. Glue for the sealing cords

10.4. Fireplace stove packaging and waste disposal

The fireplace stove is shipped on a wooden transport floor and fitted with a protective crating. Stoves are protected with PE foil against weather effects. The stability and consistency of the entire packaging for storage and transportation is guaranteed by the use of metal or plastic tapes.

Disposal of packaging: Use the wooden crate, the pallet and the PE foil to be recycled. Sort the steel tape for the waste collecting point.

Disposal of a stove: In case of the fireplace stove disposal, remove the lining from the combustion chamber, glass, sealing cords, ceramics and natural stone and put into the solid municipal waste and hand over the sheet metal parts to the metal waste collector.

Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE) is applied to the disposal of stoves. In the EU / EEA, such a product is marked with a crossed-out wheeled bin symbol directly on the product and / or packaging.
Upon disposal, the product must not be treated as normal household waste or disposed of as mixed household waste. You can return this product to dealer if he is involved in the re-disposal of the waste, or return it for recycling to your local collection point.
Applies only to stoves that include electrical equipment.
For more information about recycling options in your country, please contact your local authorities. The end user is responsible for complying with local laws when disposing of this product.

10.5. Declaration of performance

Under EU Regulation No. 305/2011, the manufacturer issues a declaration of performance for each product that is launched on the market.
Under the usual conditions and operation stated by the manufacturer, the product is safe.
The manufacturer has taken measures to ensure compliance of all their products launched on the market with the technical documentation and with the applicable requirements.
Declaration of performance for each products is available on: www.haassohn-rukov.com

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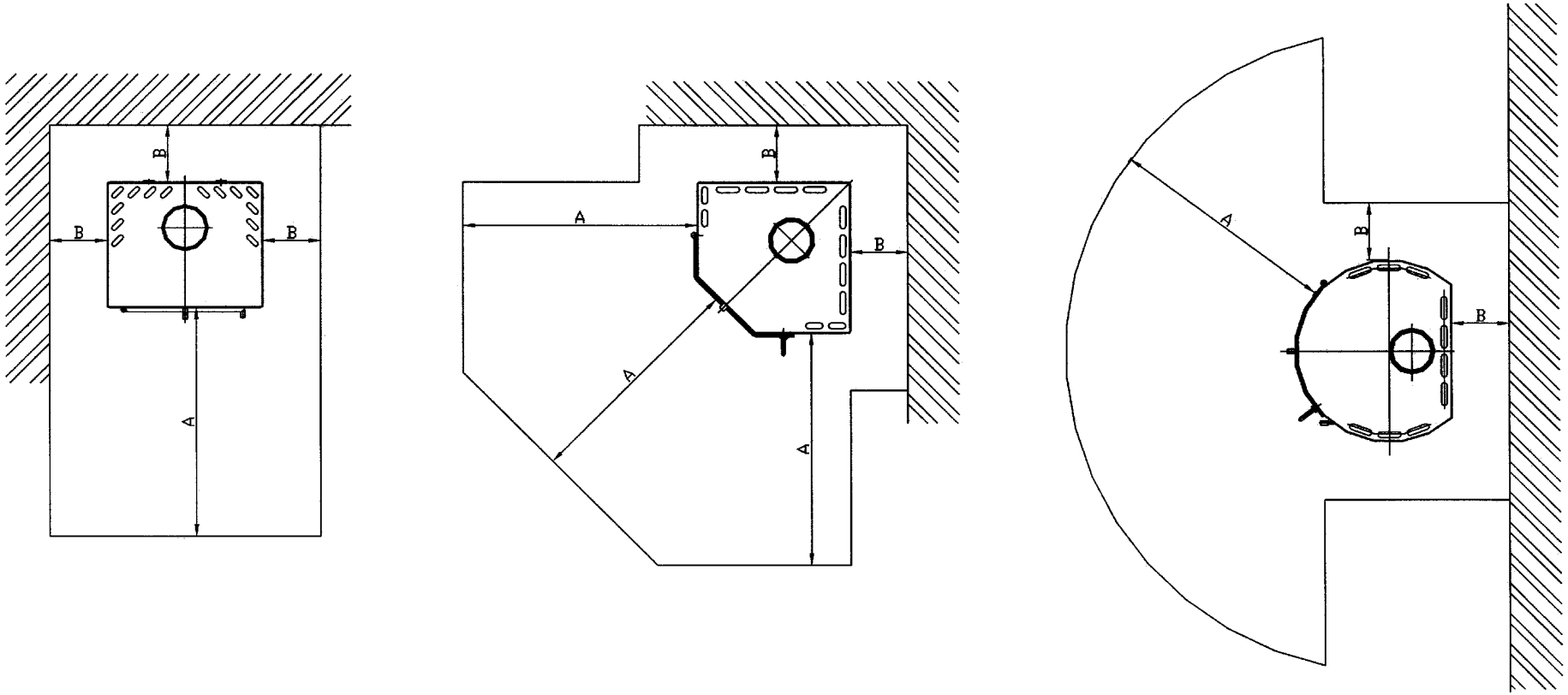
11. Attachments

- Equipment sheet for the fireplace stove type
- Appendix 1
  – Safety distance around the stove
- Appendix 2
  – Example of placement of the protective blind and flue pipe
  – Flue pipe path through the wall made of flammable materials
  – Direct connection of the stove to the chimney with a set-back from a wall
  – Examples of correct and incorrect connections of the flue pipe to the opening of the flue liner (chimney)
- Warranty card

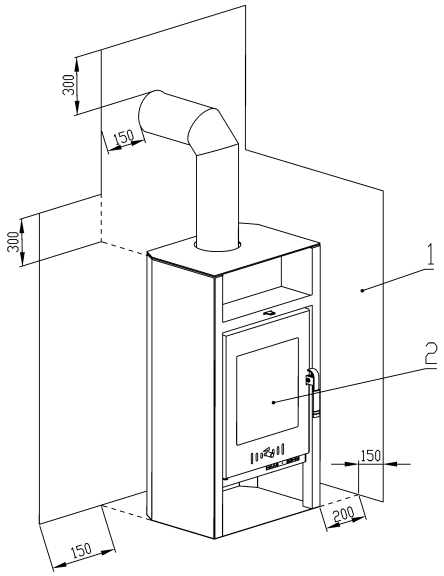
SAFETY DISTANCE AROUND THE STOVE



MINIMUM DISTANCES
A > = 800 mm
B > = 200 mm

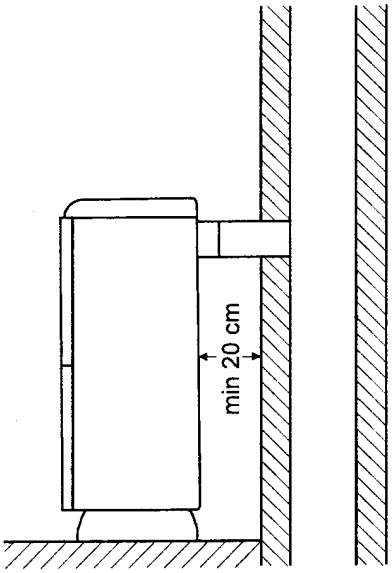
Appendix 1

EXAMPLE OF PLACEMENT OF THE PROTECTIVE BLIND AND FLUE PIPE
(dimensions in mm)

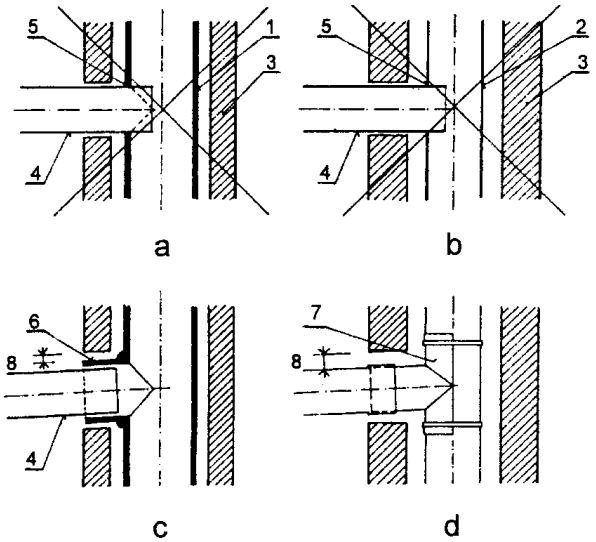


1 – fireplace screen protecting surrounding objects from the effects of heat
2 – combustion chamber opening and ash pan opening

DIRECT CONNECTION OF THE STOVE TO THE CHIMNEY WITH A SET-BACK FROM A WALL

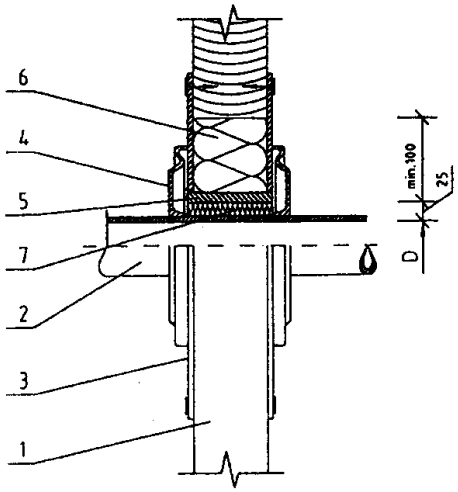


CONNECTION OF THE FLUE PIPE TO THE OPENING OF THE FLUE LINER



1 – ceramic (metal) liner
2 – metal flue liner
3 – chimney jacket
4 – metal flue pipe
5 – opening of the flue liner
6 – the junction to the chimney liner
7 – chimney breast attached to the liner with metal strips
8 – expansion gap between the fitting and the chimney jacket
CORRECT – see c, d **INCORRECT** – see a, b
Comment on ČSN 73 4201

FLUE PIPE PATH THROUGH THE WALL MADE OF FLAMMABLE MATERIALS
(dimensions in mm)



1 – wall
2 – flue pipe
3 – cover plate (non-flammable, non-metallic)
4 – circular air grid
5 – protective pipe (non-flammable, non-metallic)
6 – insulating filler I (non-flammable, e.g. fibreglass)
7 – insulating filler II (non-flammable, e.g. special clay)
ČSN 06 1008

Appendix 2

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Guarantee

Providing that the product is used, operated and maintained in conformity with the instructions and recommendations in the Instructions for Operation, the Manufacturer provides a guarantee period of 24 months from the date of take over by the customer on the correct function and operation of the product: it is guaranteed that the characteristics and parameters of the product will be in conformity with the respective norms and technical specifications for the whole guarantee period.

Should a defect occur in the course of the guarantee period not caused by the customer (user), force majeure (e. g. nature disaster), unauthorised modification or repair or use in contradiction with the Instructions for Operation, the product will be repaired for the customer free of charge.
The guarantee does not cover common wear and tear.

The guarantee period is extended by the time of the repair. Product replacement or making the contract of purchase invalid is subjected to the provisions.

Door		**Lip - loose**		**Finish (door)**	
Handle		**Exchanger**		**Finish (facings)**	
Facings		**Ashpan**		**Accessories**	
Lining (fireclay)		**Cover**			
Lining (vermiculite)		**Finish (body)**			

Date of sale	Shop (ID, stamp)	Signature

Date	Output Control ID	Signature

Nameplate

Defect reported (date)	Repair date	Repair Protocol No.	Service Technician (signature)	Defect – Corrective action

Manufacturer:

HAAS+SOHN

NÁDRAŽNÍ 260, JIŘETÍN POD JEDLOVOU, CZECH REPUBLIC
ID: 62740989 TAX ID: CZ62740989

All documents such as operating instructions, appliance sheet, test reports etc. and contact details can also be found under:

www.haassohn-rukov.com