DOO pro-termo

KAMIN ALPINA BOILER 24KW/30KW

Solid fuel fireplace stove

INSTRUCTIONS FOR INSTALLATION, ADJUSTMENT AND USE

TÜVNORD TÜV NORD CERT GmbH ISO 9001 tuev-nord.de

CE

ECO DESIGN 2022 APPROVED

BImSchV Stufe 2 EMISSIONSGEPRÜFT

eco project

Dear customers,

We appreciate your trust and decision to use the "PRO TERMO" product.

You have invested in an energy-efficient and high-quality product - ALPINA BOILER 24KW/30KW wood-burning fireplace.

Your purchase will provide you with long-lasting, clean and comfortable heating with minimal maintenance.

Please read this manual carefully and completely.

The purpose of this manual is to inform you about the installation, operation and maintenance of your fireplace stove. Keep the manual handy so you can use it when needed. In it you will find information that will be useful to you both now and in the years ahead.

Make sure that when installing the fireplace stove, all safety standards are met and that all pipes, pipe joints with the fireplace stove and pipe joints with the wall are done properly.

Failure to comply with these standards and carelessness during installation can lead to property damage or endanger your life and health!

Place your fireplace stove in a safe place, away from frequent passages and doors. Place it near the chimney and the rosette on the chimney.

We wish you many pleasant moments with the fireplace stove KAMIN ALPINA BOILER 24KW/30KW.

PRO TERMO d.o.o.

THE CONTENT

WARNING BEFORE USE

In order for your product to work properly, it is very important that you read this manual carefully and that you strictly follow the instructions for use and handling.

For combustion, use only solid fuels such as wood or wood briquettes. It is forbidden to put explosive devices and substances in the firebox or on the hearth of the fireplace stove. It is forbidden to keep flammable materials in the immediate vicinity of the fireplace stove. It is forbidden to cover the fireplace stove.

For proper combustion, under normal operating mode, the underpressure in the chimney should be from
12-15 Pa. In case the underpressure is greater than 17Pa, it is necessary to use a regulating valve at the exit for the chimney.

The room in which the fireplace stove is located must be ventilated regularly for the supply of fresh air necessary for combustion.

Parts of the fireplace stove heat up during operation to high temperatures and proper precautions are required when handling. Do not allow children to handle and play near the stove.

Only those spare parts allowed by the manufacturer may be installed on the fireplace stove. No modifications may be made to the fireplace stove.

During the first lighting, there may be slight smoke, especially from the surface of the stove. It is a common phenomenon that occurs due to the burning of deposits on the surface of the panel (anti-corrosion protection, paints, dust...). Ventilate the room in which the stove is placed during the first burning.

It is not allowed to connect the stove to a common chimney because this can have a bad effect on the required draft.

A device that uses gas as fuel MUST NOT be connected to the same chimney.

During installation, national and local regulations for the installation of a fireplace stove must be observed.

In case of non-observance of the instructions for use, the manufacturer bears no responsibility for any damage to the fireplace stove.

DESCRIPTION OF THE FIREPLACE STOVE

The ALPINA BOILER 24KW/30KW floor fireplace stove is manufactured and tested according to the European standard EN 13240 and confirmed by an accredited laboratory. The stove has a CE mark, which confirms that the product complies with the requirements of European directives in terms of safety. Fireplace stoves comply with Eco Design, Eco Project, BimSchv2 standard. The primary goal of fireplace stoves is to reduce negative effects on the environment, improve and increase efficiency. The production of fireplaces is covered by the international standard ISO 9001, which contains requirements for the quality management system, which confirms that Pro Termo has harmonized its production and operations with internationally recognized norms. Fireplace stoves are also compliant with regulations and requirements (Eco Design, BImSchV2, ...) related to protection against harmful effects such as air pollution or noise.
The ALPINA BOILER 24KW/30KW single-story fireplace stove has a boiler with a volume of 24kw-28l and 30kw-33l, which is made of boiler sheets, 4mm thick and tested at a pressure of 4bar. The stove is lined with decorative thermo-accumulation ceramics (beige, burgundy, gray,...). The grid is made of gray cast iron with a thickness of 15 mm, the doors of the firebox are made of sheet steel and have a fire-resistant stand on them.

The multi-storey fireplace stove is intended for heating residential premises and has the possibility of working in automatic mode. In order for it to work in automatic mode, it is necessary to install a bimetallic air regulator on the back of the boiler. The bimetallic air regulator is mounted on the back of the boiler, by connecting to the central outlet (muff) of ¾".
The recommendation for a bimetallic draft regulator is the ESBE draft regulator of the ATA 200 series (picture no. 1):
The ESBE draft regulator of the ATA 200 series is an independent device with an integrated expansion thermostat designed to regulate the water temperature by adjusting the air flow in solid fuel boilers. No electrical installation is required for operation. Using a lever and a chain, the position of the air opening is adjusted, which regulates the air supply for combustion in the boiler (must be calibrated during the installation of the stove).

Picture No. 1

Note: The bimetallic draft regulator is not part of the product and is not supplied with the product.

Technical characteristics:

Model		ALPINA BOILER 24KW	ALPINA BOILER 30KW
Maximum power	kW	24.31	30.81
Heat transferred to water	kW	20.76	26.93
Heat transferred to air	kW	3.55	3.88
Efficiency	%	79.57	79.6
Fuel		Wood, briquette	Wood, briquette
Oven dimensions	mm	500 x 480 x 1020	565 x 480 x 1020
Dimensions of the firebox	mm	340 x 340 x 310	390 x 340 x 310
Weight	kg	120	130
Minimum distance from flammable materials			
From the back	mm	440	440
On the side	mm	440	440
From the front	mm	800	800
CO content (13% O2)	%	0.09195	0.0979
Flue diameter	mm	150	150
Air regulation			
Primary		yes	yes
Secondary		yes	yes
Boiler capacity	l	28	33
Required negative pressure in the chimney	Min.Pa	12	12
Draft (smoke) control valve	%	63	63

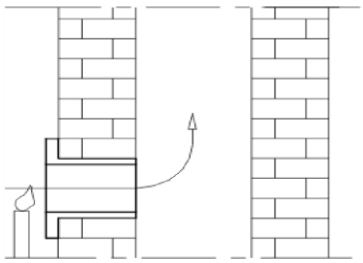
INSTALLATION OF THE FIREPLACE STOVE

You must not place the fireplace stove in the immediate vicinity of wooden elements, cooling devices, plastic parts of furniture and other flammable materials, because during its operation (when burning fuel) it achieves a high operating temperature that is distributed over the outside of the fireplace stove. The minimum distance between the fireplace stove and the surrounding elements is 44 cm, and from combustible materials 80 cm. If the base on which you will place the stove is made of easily flammable material (wood, underfloor heating, laminate...) it is necessary to install sheet metal protection - 10 cm wide on the sides and 50 cm in front. Due to its weight, the fireplace stove must be installed on a floor with a suitable load-bearing capacity. If it does not meet the requirements, suitable measures must be taken to achieve this (eg weight distribution).

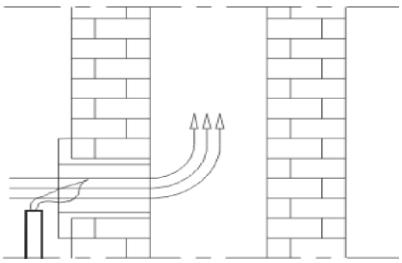
Connect the fireplace stove to the chimney with flue pipes through the connection on the upper side of the fireplace stove, so as to ensure adequate sealing and flow of smoke from the fireplace stove to the chimney. The flue pipe must not be inserted too deeply into the chimney, so as not to reduce the cross-sectional area and thus impair the draft in the chimney. Do not use reducers that would reduce the cross-section of the smoke exhaust pipe. The fireplace stove requires the introduction of fresh air into the room in which it is installed, whereby the area of the opening for the introduction of fresh air must not be less than 0.4dm². Mount the fresh air supply outside the room where the fireplace stove is located (it is mandatory to use the outside part of the house or building), the air supply must be secured by a door and grate.

Fans operating in the same room as the fireplace stove can interfere with the operation of the stove. Also, all devices or ventilation that create negative pressure in the room where the stove is installed, must be adjusted so as not to create decompression that prevents the normal operation of the stove.

Before installing the stove, check the chimney draft because it is one of the key factors for the proper functioning of the stove. The draft depends on the correctness of the chimney and meteorological conditions. One of the simplest ways to check for drafts in a chimney is with a candle flame, as shown in Figure 2a and 2b. Bring the candle flame to the connection opening of the chimney and if it bends towards the opening, the draft is satisfactory (picture 2b). Weak bending of the flame is an indication of poor draft (Figure 2a).

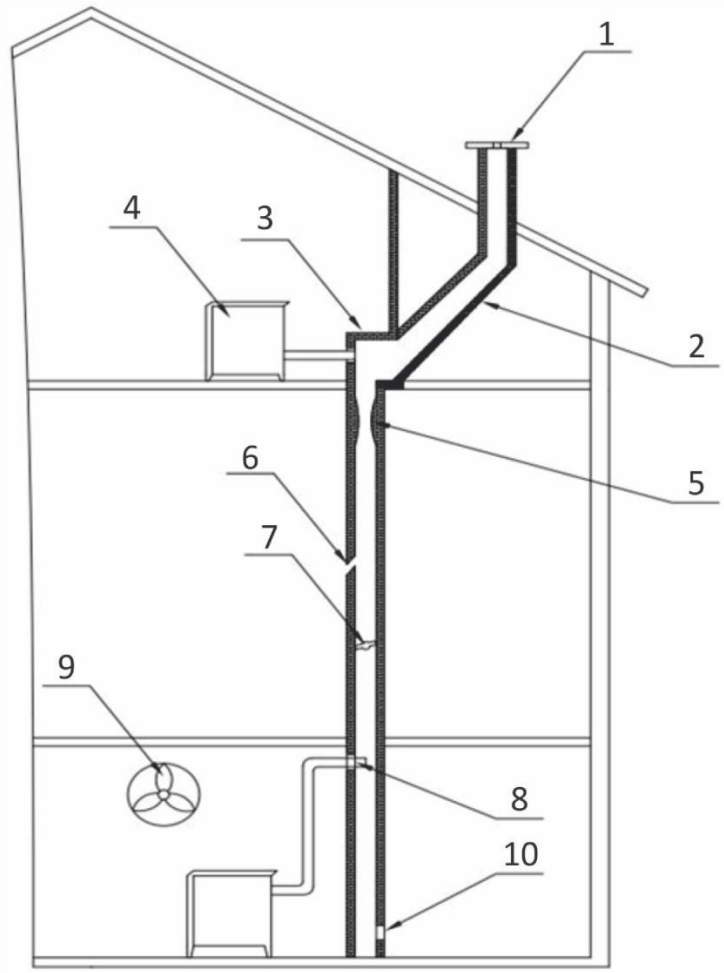


Picture no. 2a.



Picture no. 2b.

If the draft in the chimney is bad (Figure 2a), check the correctness of the chimney. The chimney should be located inside the building, and if it is on the external walls of the building, insulation of the chimney is recommended.



Picture no. 3.

1. Disadvantages of the chimney can be (picture no. 3):`
2. The chimney is lower than the top of the roof, the exit cross-section is small,
3. Excessive slope,
4. A sudden change in the direction of the smoke channel,
5. A stove or other device connected to the same flue,
6. Bumps in the flue,
7. Cracks,
8. Foreign body or accumulated sludge,
9. Tube inserted too deeply,
10. Fan or other device that creates negative pressure in the room
11. Unsealed or open cleaning opening

INFIRE AND BURNING

Before the first firing, wipe all painted surfaces of the stove with a dry cloth to avoid burning impurities on the stove and creating unpleasant odors. Start the fire in the fire pit in the following order:

• open the smoke damper regulator to the maximum (position 90°), picture no. 4
• open the firebox door of the fireplace stove,
• insert firewood into the fire pit (shredded wood on ungreased crumpled paper),
• set fire to fire,
• close the combustion chamber door,
• leave the primary air manual regulator (ashtray door, picture no. 6) and the secondary air manual regulator (burner door, picture no. 5) open as much as possible, also set the desired boiler water temperature on the bimetallic regulator (picture no. 1). Leave the manual regulators open. until the flame stabilizes, after the flame stabilizes adjust the primary and secondary air regulators as necessary.
• after creating basic embers, insert larger pieces of wood or briquettes into the firebox and close the door of the firebox.
If briquettes are used as fuel, it is necessary to wait until the entire amount of fuel is ignited, and only then reduce the draft by half.
• when adding fuel, open the combustion chamber door (picture no. 5) only a few degrees, wait 4-5 seconds, and then slowly open it wide. Do not open the door suddenly, because when there is a strong flame in the firebox, smoke and flames can spill into the room.

By regulating the draft and air in the furnace, you regulate the temperature, power and speed of burning fuel. Regulation of draft and air in the furnace is achieved with the help of:
- dampers for draft smoke,
- Combustion door (secondary air),
- Ashtray door (primary air),
- Bimetallic water temperature regulator (must be calibrated when installing the stove with the help of a chain and a lever).

Draft damper,

firebox door,

ashtray door,

bimetallic regulator

Wood and briquettes are recommended for burning.

Heating oil, gasoline and the like must not be used as fuel, because the use of liquid fuels creates conditions for damage to the fireplace stove and explosion.

- **Attention!**
- Do not use organic waste, food scraps, plastic items, flammable and explosive materials as fuel, the combustion of which disturbs the proper operation of the stove and can cause damage and pollution of the environment.
- Elevated outside temperatures can cause poor air flow (draught) in the chimney, so it is recommended to burn more often in smaller quantities.
- Avoid using the stove in cases where there are bad weather conditions for the stove to work and in case of strong wind, because this affects the required negative pressure in the chimney. In the mentioned cases, smoke may return to the room where the stove is located. The fire was then aggravated.
- We recommend burning for 1 hour with a height of fuel in the firebox up to 15 cm with cross arrangement of wood due to greater drafts. After each filling, it is recommended that the stove burns for at least 30 minutes with maximum power, so that in that phase of combustion, all the volatile ingredients that are the reason for the formation of condensation in the stove will be burned.

For the stove to work properly, you need:
- regular cleaning of stoves and chimneys,
- regular ventilation of the premises for good combustion,
- regular removal of ash from the furnace ashtray, maximum use of 50% of the ashtray capacity.
- regularly remove the accumulated slag and unburned substances from the grate and the side of the boiler

MANAGING THE OPERATION OF THE STOVE

Start the fire with a moderate fire in order to avoid thermal shocks. The next amount of wood is inserted only after the previous amount has burned and become glowing. Do not allow clogging of the grate with ash and unburned fuel. Clean the grate.
Every opening of the combustion chamber door (picture no. 5) requires that the smoke damper regulator (picture no. 4) be opened to the maximum (90° position). otherwise, smoke may appear in the room.
The fireplace stove is designed and intended to work with the firebox door permanently closed, except when filling with fuel. Do not open the door unnecessarily. The wood must be with a maximum of 20% humidity for maximum burning performance. Otherwise, tar and gases are released, which with water vapor create creositol resin. If it appears to a greater extent, a fire may occur in the chimney. You will most easily recognize a chimney fire by: the characteristic sound coming from the chimney like a loud roar, the visible flame coming out of the chimney, the high temperature of the surrounding walls and the characteristic burning smell.
In the event of a fire, take the following steps:
- Call the fire department immediately.
- Shut off the oxygen supply to the chimney and turn off the stove.
- Do not insert anything into the chimney and make sure that the fire does not spread to the wooden structure or other combustible material nearby.

• **NEVER** extinguish the chimney with water or pour water into the stove
• You can only put out a fire in the chimney with a device with dry powder
• Only the surrounding material can be extinguished with water
• **Do not cool the surrounding walls with water**

Note:

If for some reason the fire in the stove becomes dangerously strong, take the following measures: close the air dampers that provide combustion air. If necessary, throw sand prepared for this purpose or a special non-flammable fire blanket into the fireplace. It would be good to have a fire extinguisher.

Clean the ashtray regularly, making sure that there is always room for ash.

I - MANUAL REGULATION:

1. Draft regulation with the help of a damper for smoke draft

"horizontal" flap position (closed-minimum), "vertical" flap position (open-maximum), (picture no. 4)

Picture no.4

2. Regulation of secondary air (burner door)

"folded holes min, open holes maximum (picture no. 5)

Picture no.5

3. Primary air regulation (ashtray door)
"folded holes min, open holes maximum (picture no. 6)

Picture no.6

II – AUTOMATIC REGULATION
(bimetallic regulation of primary air)
NOTE: must be calibrated when installing the stove with the help of a chain and a lever (picture no. 7)

Picture no.7

The speed of combustion, and thus the amount of heat given off by the fireplace stove, depends on the amount of primary air for combustion that is brought into the space under the grate. Regulation of the amount of primary air is achieved automatically by means of a draft regulator.

When burning, set the bimetallic regulator to the desired water temperature, which is located on the back side of the fireplace. During the operation of the fireplace stove, depending on the water temperature, the regulator valve will open and close automatically.

INSTALLATION OF A FIREPLACE STOVE IN A WATER HEATING SYSTEM

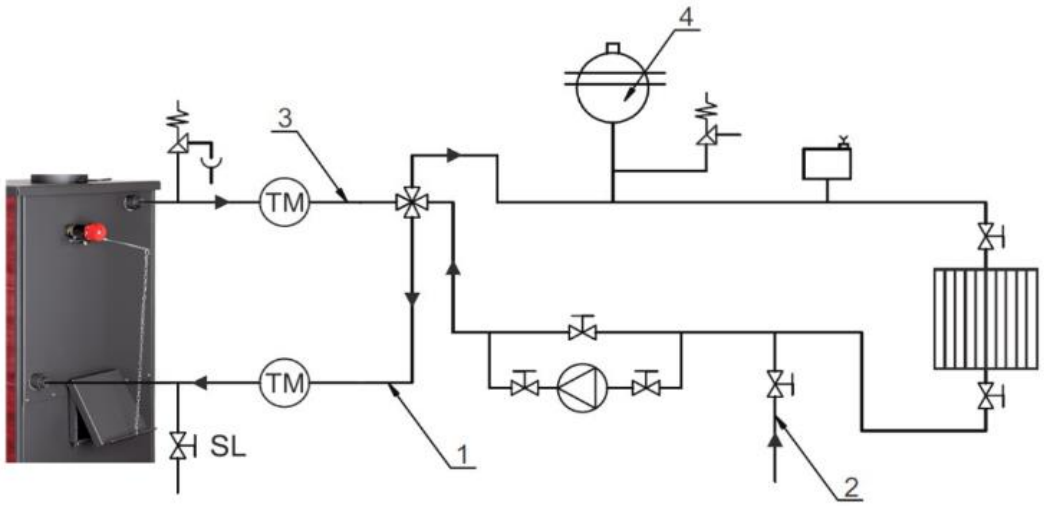
- Connections on the boiler 1" are provided for the supply and drainage of water to the floor (central) heating system.

- The fireplace stove can be mounted on a closed or open central heating system.
- Installation on a closed central heating system
- One of the ways of carrying out installations is shown in picture no. 8a, picture no. 8b.

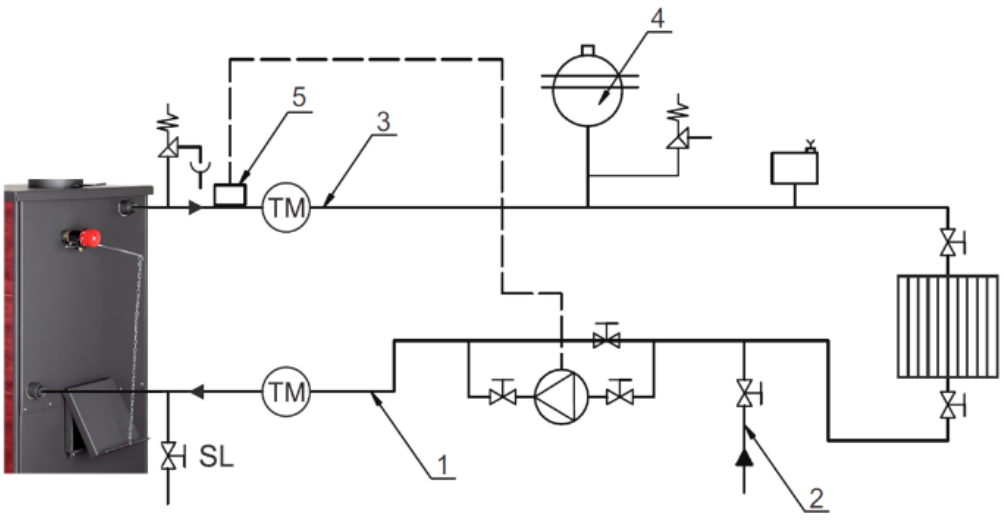
- The safety valve must be placed near the boiler and must be set to a maximum pressure of 3 bar (the boiler is tested at 4 bar). The connection line of the safety valve must be as short as possible and must not have the possibility of closing. Also, there must not be a single valve or any other fitting in this line. The recommendation for the working pressure of the boiler is from 1 bar to 2 bar. The closed expansion vessel is placed close to the boiler and its line is short. The volume of the expansion tank is determined according to the formula:

- V=0.07xVvode, (l), where Vvode is the volume of water in the entire plant.

- Mandatory installation of a vent valve (preferably automatic), which is placed at the highest point in the system. Before putting the floor fireplace stove into operation, it is necessary to vent the system.



Picture no. 8a.
Scheme of a closed system
with four-way mixing valve



Picture no. 8b.
Scheme of a closed system
with an adjacent thermostat

	Pump	1. Supply line
	Valve	2. System filling line
	Vent valve	3. Distribution line
	Safety valve	4. Expansion vessel
	Mixing valve	5. Push-on thermostat
TM	Thermomanometer	
	Radiator	
SL	Drain tap	

Installation on an open central heating system

One of the installation methods is shown in Figures 9a, 9b. In this system, the pressure is achieved by the height difference of the air vessel (0.1bar x 1m). A short connection between the safety distribution line and the safety return line is placed directly below the open expansion vessel, which ensures that the water in the expansion vessel does not freeze in winter. There must be no fittings on the safety distribution and safety return lines. The expansion vessel itself must have an overflow pipe as shown in the diagram in Figure 8a and 8b. The volume of the expansion tank is determined according to the formula:

V=0.07xVvode, (l), where Vvode is the volume of water in the entire plant.

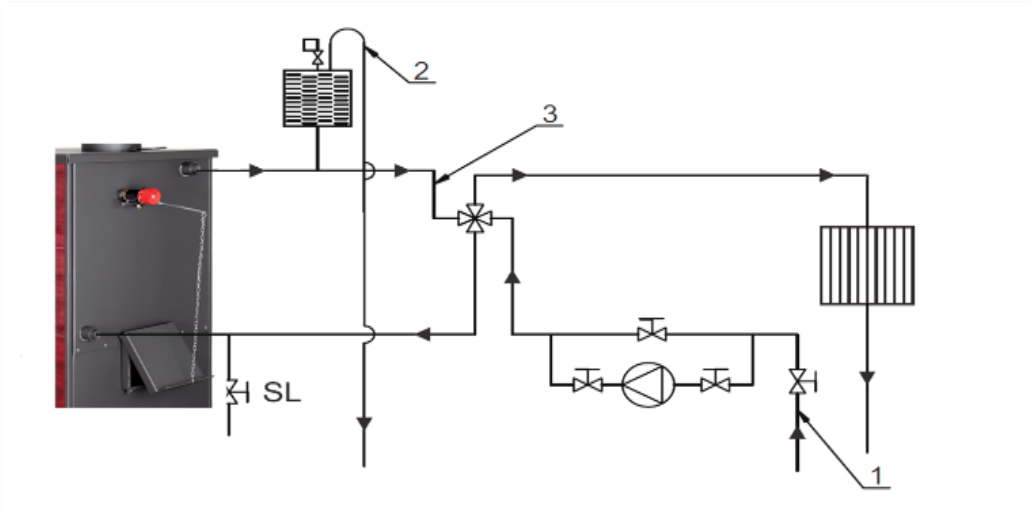
The open expansion vessel is placed vertically above the highest heating element.

Note: Installation of heating and commissioning of the entire system should only be entrusted to a professional who guarantees the correct operation of the entire heating system. In the case of a poorly designed system and possible omissions during the execution of works by that person, the complete financial responsibility is borne exclusively by the person entrusted with the installation of the heating system and not by the manufacturer, agent or seller of the boiler.

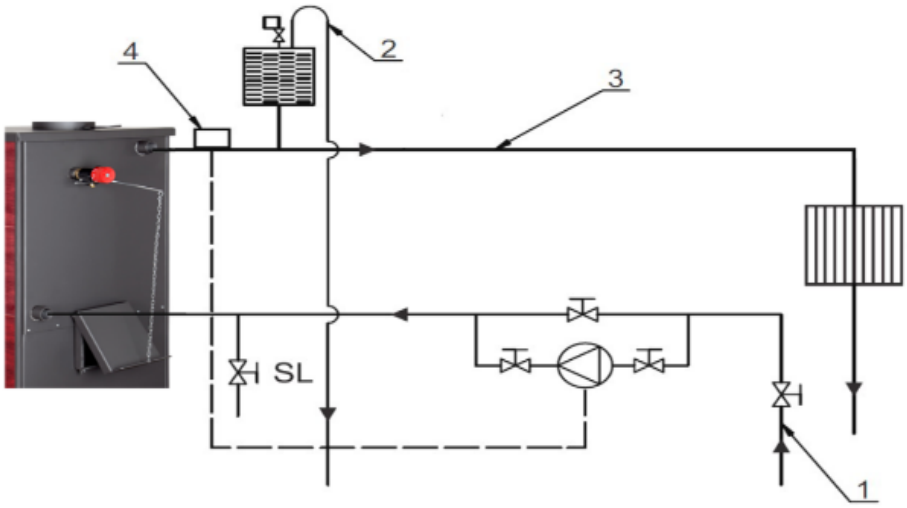
Important:

- Installation of the fireplace stove should be performed by a professional according to the appropriate project. The construction of the fireplace stove enables it to be connected to a closed or open heating system. All connections must be well sealed and tightened. Before commissioning, the complete installation should be tested with water under a pressure of 3 bar.
- When installing the safety valve, pay attention to the direct connection to the drain and sewerage, as well as to the fact that the valves (taps) must always be open.

Before the first firing, it is necessary to check the correctness of the valve and check the correctness of the draft regulator and the installation for the distribution of hot water to the radiators, as well as the radiators themselves.



Picture no. 9a.
Open system scheme with four-way mixing valve



Picture no. 9b.
Open system scheme with an adjacent thermostat

	Pump	1. Supply line
	Valve	2. System filling line
	Vent valve	3. Distribution line
	Safety valve	4. Expansion vessel
	Mixing valve	5. Push-on thermostat
	Thermomanometer	
	Radiator	
SL	Drain tap	

CLEANING AND MAINTENANCE OF THE STOVE

- By regular and proper cleaning, you enable correct operation and prolong the life of the fireplace stove. All cleaning, exterior or interior, is always done on a cold stove.

- Cleaning of external surfaces - is done with a soft cloth that will not damage the surfaces of the fireplace stove. Cleaning agents of chemical origin damage the surfaces of the fireplace stove and cannot be used. Do not clean painted surfaces with abrasives.

- Cleaning of internal surfaces - use protective gloves when cleaning the stove.
- Clean the inner walls of the hearth of the fireplace stove from accumulated cinders, pick up small and unburnt pieces from the grate, clean the ashtray and accumulated ash inside the fireplace stove.

- Cleaning of glass surfaces - the glass of the firebox can become dirty during the exploitation of the fireplace stove. Use mild detergents for cleaning. Do not use abrasives as the surface of the glass may be damaged. Clean the glass only when it has cooled down.

- Cleaning and maintenance of the chimney - cleaning and control of the chimney is recommended at least once a year, as well as after a longer interruption of operation. Regular maintenance and control of the chimney will prevent the occurrence of fires and poor operation of the stove.

WORKING IRREGULARITIES - RECOMMENDATIONS FOR THEIR ELIMINATION

The following table shows the most common work irregularities and recommendations for their elimination.

Table: Presentation of the most common malfunctions, possible causes and methods of elimination.

Irregularities	Possible cause	Elimination of irregularities
the stove heats poorly	improper handling bad chimney	• carefully read and follow the instructions
difficulty in starting a fire	closed air supply regulator wet wood uncleaned ash from the grate	• • open the air supply regulator and ensure the primary air supply • • use dry wood • • clean the grate
smoke returns to the room	closed smoke draft damper insufficient draft lack of oxygen	• • open the draft damper • • read the instructions carefully and apply the tips for ensuring drafts • • ventilate the room to ensure the flow of fresh air
the glass of the firebox door burns in a short time	wet wood too much fuel intake insufficient draft closed secondary air supply	• • use dry wood • • see the suggested amount of fuel for combustion given in the manual • • check the connection with the chimney • • read the instructions carefully and apply the tips for providing secondary air
insufficient radiator heat - less than 50°C	improper handling oversized heating system air in the system	• • carefully read and follow the instructions • • disconnect the excess radiator from the system if the power of the radiator in the system exceeds the power that the fireplace stove delivers to the water • bleed air from the system

GENERAL REMARKS

If all the recommendations for installation, operation regulation and cleaning, given in this manual, are met, the fireplace stove is a tested and safe appliance for household use. Dispose of the old stove that you no longer want to use in a designated place in accordance with the regulations. All complaints, assessed as defects or malfunctioning of the stove, should be reported to the factory or authorized service by phone or in writing with the fiscal invoice. All contact details are given at the end of this manual.

Any defect on the stove is removed exclusively by the factory service. If unauthorized persons carry out servicing or any repairs and alterations to the stove, the owner of the stove loses the right to service guaranteed by the manufacturer's warranty.

Only if the manufacturer allows, it is possible to independently replace certain parts of the stove, and then the right to the warranty is not lost. The procurement of spare parts is done exclusively through the factory service.

The manufacturer bears no responsibility if the customer does not follow the instructions for use and installation of the fireplace stove.

TIPS FOR ENVIRONMENTAL PROTECTION

Packaging

- The packaging material is 100% recyclable.
- When disposing of waste, comply with local regulations.
- Packaging material (plastic bags, polystyrene-styrofoam parts, etc.) should be kept out of the reach of children, as it is a potential source of danger.
- Take safety precautions when removing and disposing of wooden slats as they are connected with sharp nails and staples.

Product

- The device is made of materials that can be recycled. When disposing of waste, comply with applicable laws on environmental protection.
- Use only recommended types of fuel.
- It is forbidden to burn inorganic and organic waste (plastic, chipboard, textiles, oiled wood, etc.), because carcinogenic and toxic substances are released during burning.

WARRANTY STATEMENT

The guarantee is valid from the day of purchase, which the buyer proves with a certified and signed Protocol.

The protocol contains details of the customer's address, date, signature and seal of the seller or his service agent.
A detailed Warranty Protocol must be drawn up by the seller of PRO TERMO products.

The guarantee will be recognized under the following conditions:

- The product has been handled in accordance with these Instructions.
- The product is not physically damaged.
- The warranty protocol is certified by the product seller or its service agent.

Product name	Serial number	Date of purchase	Signature and seal of the seller or his service agent
☐ KAMIN ALPINA BOILER 24KW ☐ KAMIN ALPINA BOILER 30KW			

NOTES:

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