INSTRUCTION MANUAL
for solid fuel cookers

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Dear customers,

Your cooker is produced and tested in conformity with the requirements of standard EN 12815:2001 and responds to the approved technical documentation.

Don't leave the instruction manual unread. The assembly and the exploitation of a cooker are connected with different legal obligations, which are explained in this instruction. According to the laws and regulations for safety, when using a cooker of such class, the buyer and the user of the fireplace are obligated, with the help of this instruction, to inform themselves for the assembling and the right operation of the appliance.

1. Introduction.

Solid fuel cookers are designed for cooking and heating, and the used fuel can be wooden logs, briquettes and other types of coals and fuel as well. The cooker can be used in kitchens and houses, but it is not suitable for integrating into kitchen furniture.

2. Technical data.

The technical specifications of solid fuel cookers are mentioned in Table 1.

Table 1.

Cooker type		Nominal heat output (kW)	Space heating output (kW)	Water heating output (kW)	Overall dimensions (mm)			Flue gas mass (g/s)	Flue gas temperature (°C)	Weight (kg)	Minimum flue draught at nominal heat output (Pa)	Boiler capacity(l)
					width	depth	height					
Plamak	Wood	9	-	-	840	600	890	12,57	290	130	12	
	Brown coals	9	-	-				13,42	273			
Plamak lux	Wood	9	-	-	840	645	890	12,57	290	131	12	
	Brown coals	9	-	-				13,42	273			
Metalik M	Wood	9	-	-	840	590	790	12,57	290	72	12	
	Brown coals	9	-	-				13,52	273			
Metalik	Wood	9	-	-	840	590	790	12,57	290	70	12	
	Brown coals	9	-	-				13,42	273			
Ognyana White/red enamel	Wood	9	-	-	840	590	790	12,57	290	70	12	
	Brown coals	9	-	-				13,52	273			
Ognyana Black enamel	Wood	9	-	-	840	590	790	12,57	290	68	12	
		9	-	-				13,52	273			
Plamak B	Wood	9	5	4	840	600	890	19,71	230	130	12	12
Plamak lux B	Wood	9	5	4	840	645	890	19,71	230	130	12	12
Plamak B 12	Wood	12	5	7	840	600	890	24,32	180	131	13	12
Plamak lux B 12	Wood	12	5	7	840	645	890	24,32	180	132	13	12

Overall dimensions of the oven	(mm)
width	410
depth	440
height	220

3. Cooker assembling.

For ensuring safe and correct operation of the cooker it is necessary to keep the following conditions:

The cooker has to be mounted in rooms which have enough fresh air supply, which is necessary for burning. After placing the cooker, it has to be connected to the chimney with the proper fluepipes, but before connecting them, their functionality has to be checked and inspected.

Not every cooker can be mounted to every chimney. Before installation, the static pressure and the size of the chimney have to be checked if they fit to the required parameters of the cooker. If the cooker is not compatible with the chimney, this will lead to weaker burning and contamination of the glass with soot.

The chimney has to be high enough (not less than 5m.) It's allowed only one more appliance to be connected to the same chimney. The flue draught of the chimney has to be over 10Pa, and over 15 Pa for cookers with water boiler. If the chimney is very high (flue draught over 35Pa) it is necessary to install additional valve for reducing the flue draught. The internal shape of the chimney has to be even and round to its full length, not square or with changing shape.

To ensure safe operation, the cooker has to be connected to the chimney by means of a spigot on the wall, and the connection has to be sealed very well. The connecting fluepipe between the cooker and the spigot has to be as short as possible, this means not to use horizontal and angular connected fluepipes. It is recommended to use not more than two crooked fluepipes, in order to avoid tar accumulation on the horizontal fluepipes and the chimney, which therefore leads to lower flue draught in the chimney.

The fluepipe does not have to enter in the chimney because this will reduce its draught.

The cooker should not be connected to a chimney, when there is already connected appliance with water boiler.

The chimney has to be designed in a way that it will allow easy mechanical cleaning.

The floor, where the cooker will be placed, should be smooth and leveled, made of non-combustible materials (such as mosaic, marble, terracotta, etc.), and possessing the required load capacity.

If the floor in front of the cooker is not heat resistant (carpets, linoleums or others of the same kind) a stable, non-combustible platform should be used, (made of steel, glass or ceramic, etc), which should come out: 50 cm in front and 30 cm from both sides, measured from the firedoor of the cooker.

Distances at which the cooker should be installed for fire precaution:

Distance to near combustible materials:

Plamak, Plamak Lux, Metalik, Metalik M, Ognyana white/red enamel and Ognyana black enamel

in front -80cm, side -40cm, back -40cm

Plamak B, Plamak Lux B

in front -80cm, side -30cm, back -30cm

Plamak B12, Plamak Lux B12

in front -80cm, side -30cm, back -30cm

If there are any easy inflammable materials and constructions, the cooker should be 80 cm away from them or it has to be supplied with non-combustible shield.

The upper surface (frames and plates) should stay at least 1m away.

Cookers : Plamak Lux, Plamak Lux B and Plamak Lux B12 are equipped with a: decorative rail – 1pce. and decorative sphere – 2 pcs. The mounting of these elements is made in the following way: on the decorative rail mount decorative sphere – 2 pcs, after that they are mounted on the cooker frame by means of the given connecting elements: screw M5x12 BDS 1230– 2pcs, washer M5, BDS 14494-79 – 2pcs and washer 2 5 L BDS 833-82 – 2 pcs.

The mounting must be done when the firedoor and the oven door are opened.

On cooker : Plamak, Plamak Lux, Plamak B, Plamak Lux B, Plamak B12 and Plamak Lux B12 are mounted:

- handle for oven door 2 pcs. by means of screw M5x45 -4 pcs
- small handle – 1pce., by means of screw M5x14- 2pcs and a washer M5 – 2pcs.

4. Cooker operating.

4.1. Fuel materials.

The most appropriate fuels are dry cleaved wood (wood logs) and briquettes. The wood logs, stored in the open under sheds, reach a humidity level of 10-15% after 2 years, when they are most suitable for combustion. We recommend to burn wood dried as much as possible. The maximum heat output of the cooker is reached after burning wood logs dried for at least 2 years period of time.

The fresh cut wood has little calorific effect, high humidity and burns poorly – they extract a lot of flue gases and additionally contaminate the environment. This leads to minimizing the longevity of the cooker and chimney as well. When using them, the heat output of the cooker falls to 50%, and the fuel consumption grows twice.

Type and recommended quantity of fuel

Type	Wood (кg/h)	Coal (кg/h)
Plamak , Plamak Lux, Metalik, Metalik M, Ognyana white/red enamel and Ognyana black enamel	3.53	2.06
Plamak B, Plamak Lux B	3.46	-
Plamak B12, Plamak Lux B12	3.94	-

It is not recommended to use the following fuels in the fireplace: wet or tarred wood, shavings, fine coal, paper and cardboard (except for the ignition).

Do not use liquid fuels.

Do not use the cooker like a furnace for burning waste matters.

If the cooker is used for burning unalloyed fuels then the warranty is not valid

At each ignition of the cooker you should observe the following: Clean the bottom grate, and the ashtray if needed, but you should do this only if the cooker is in cold condition.

4.2. Assembly parts.

Glass of the door of the combustion chamber (for Metalik, Ognyana white/red enamel and Ognyana black enamel)

It is a ceramic glass, resists up to 850 ® C and cannot be damaged by the temperature, reached during the exploitation of the cooker. The glass can be damaged by a mechanical act during the mounting, during the transportation of the cooker or by placing of huge chopped wood into the combustion chamber.

The glass is a part of fast wear parts and is covered by the guarantee.

Soot of the glass

The design of the cooker prevents soot of the glass during the exploitation. Soot can be only in case of bad burning, caused because of the following : static pressure and the size of the chimney do not conform to the required for the cooker parameters, the incoming air flow has been stopped too early or the right burning material is not used.

We cannot act on these conditions and because of this we do not guarantee that the glass will be soot clean.

Glass on the oven door.

The mounted glass is tempered. During exploitation prevent cold water drops on the glass.

The glass is a part of fast wear parts and is covered by the guarantee.

Refractory bricks (shamote).

The combustion chamber of the cooker is sealed with refractory bricks. These bricks accumulate the heat and radiate it back into the combustion chamber to increase the burning temperature. Higher burning temperature means more effective burning process. Because of too high temperature or mechanic act the refractory bricks can be damaged. Too high temperatures can be reached when at higher chimney draught the primary air adjuster is open – uncontrolled burning. Mechanical act is pushing the wood into the combustion chamber or using bigger size chopped wood.

The refractory bricks can be easy replaced. If there is just a cleft on a brick it is not necessary to replace the brick. But if you can see the metal parts between or under them it is necessary to replace the brick.

The refractory bricks are part of fast wear parts and are covered by the guarantee.

Seals

The seals of the cooker are made of a special glass fiber and of technical basalt cardboart. They do not contain asbest. The seals are wear parts and must be changed with new ones after a period of exploitation. Your merchant can order the seals for you.

The seals are part of fast wear parts and are covered by the guarantee.

Fire-grates

The cooker is equipped with fire-grates. Cookers Plamak B12, Plamak Lux B12, Metalik, Metalik M, Ognyana white enamel and Ognyana black enamel have got just one fire-grate. The fire-grates can be clogged by nails, small wooden pieces or by waste burning materials. Regularly clean the fire-grates to keep them in good operation condition. In case of too high temperatures because of wrong operation or because of wrong burning material the fire-grates can be damaged.

The fire-grates are part of fast wear parts and are covered by the guarantee.

Coating of the cooker.

The coating can be : enamel, epoxy-polyester powder and high temperature resistant paint or just high temperature resistant paint.

The high temperature resistant paint resists at high temperatures, but not to corrosion. At wrong exploitation corrosion can be on the painted cooker surfaces. **It is not covered by the guarantee.**

During the initial putting of the cooker in operation it is necessary few hours to heat the paint to be calcined and to reach it final resistance. The door of the combustion chamber must be slide open to prevent sticking of the seal of the door to the painted surface. During this period do not put anything on the cooker and do not touch the surfaces to prevent damaging. The smell, caused because of the calcined paint will not be after few hours. Fresh air must circulate in the premise.

If because of overheating or because of wrong servicing the color is changed to gray-white or a corrosion spot occurs – this is not a problem. You may order a same color spray dose paint to your merchant.

Handles.

The handles of the cooker are plastic (phenoplastic), bronze or nicker coated. The advantage is that they are not wear parts. The handles are heated as much as the front part of the cooker and because of this a thermo – resistant glove must be used to operate.

Water boiler.

If your cooker has a water boiler, before the assembly and the initial lighting of the cooker you should learn the information in table 1.

A cooker, equipped with a water boiler, must be mounted only by an authorized organization!

4.3. Ignition at operation.

Your cooker is designed for intermittent burning and operates only with doors closed. At each ignition you should observe the following:

4.3.1. Ignition at lower combustion.

Lower combustion is obligatory used for cooking and baking in the oven, and when cooking the regulator for the flue gas, positioned to the flue pipe outlet needs to be fully opened. With this regulator you can adjust the temperature for baking - up and down. The internal temperature of the oven depends on the intensity of burning, the flue draught and the amount of fuel. The intensity of burning is regulated by the primary air. By adjusting the primary air you can achieve proper regulation of the temperature inside the oven. If you want to reach high temperature in the oven and the cooker is still cold it is recommended to ensure high heat and temperature in the cooker and to open the regulator for the oven (see fig.1) and the regulator for the primary air. (see fig.2) by moving the adjuster in the given directions. When the required temperature is reached in the oven the intensity of burning has to be decreased by closing the primary air regulator and the oven air inlet control. This will keep the temperature in the oven constant.

When the air inlet control of the oven is positioned at:

- rearmost position it is open;
- foremost position it is close -the heat will go under the oven;
- middle position -opened ½ the heat will go under and above the oven.

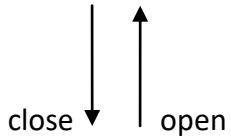

Fig.1.

The air inlet control of the oven is positioned on the top plate of the cooker by the flue gas outlet.

for Plamak,Plamak Lux, Plamak B, Plamak Lux B, Plamak B12, Plamal Lux B12, Metalik M, Ognyana white/red enamel and Ognyana black enamel :

When the air inlet control for primary and secondary air supply are positioned in:

- End left position -close
- End right position -open

Fig.2.

The air inlet control is positioned on the firedoor.

The secondary air of cookers Ognyana white enamel and Ognyana black enamel is ensured by the construction and cannot be adjusted.

for Metalik:

The primary air is adjusted by the air inlet control positioned on the firedoor under the glass. The primary air is adjusted by moving the regulator.

When the primary air regulator is positioned in:

- End left position -close
- End right position -open

Fig.3.

The secondary air is ensured by the construction and cannot be adjusted.

The fuel is placed on the fire-grate, for cookers Plamak, Plamak Lux, Plamak B and Plamak Lux B on the top fire-grate, and and then it is fired. If there is not enough oxygen the door of the ashtray can be barely opened (cannot be for cookers Metalik, Metalik M, Ognyana white enamel and Ognyana black enamel). After the fuel is fired well the ashtray door has to be closed. After that the intensity of the burning is regulated by the regulators for primary and secondary air supply.

For constant burning you have to add wood or coals by spreading them on the whole grate.

Attention!

When the oven is used you need to add more fuel. The flue gas volume is bigger and the temperature heating will be even and constant.

If your cooker has a water boiler you may close some of the radiators.

4.3.2. Upper ignition.

Regarding Plamak and Plamak B only.

The upper ignition is used when the cooker is used only for heating. For models : Plamak, Plamak Lux, Plamak B and Plamak Lux B Before ignition the top grate is removed and the firedoors are closed. This is not applicable for cookers Plamak B12 and Plamak Lux B12 because these cookers have just one fire-grate. The fuel is added from the top cover positioned on the top plate, and a vertical wood log is placed in the middle. It's recommended that the coals are placed till the level of the removed grate, for Plamak B12 and Plamak Lux B12under the level of the upper door opening, which will allow opening of the upper firedoor and ignition of the fuel from there. After the fuel is well ignited, ignition adjusting is enabled as when lower ignition process.

4.4. Recommendations for ventilation.

Very important factor for proper burning of the cooker is to ensure additional air supply in the room, which should be minimum $4m^3/h$ for kW of the total heating power. If there are additional heating appliances in the room it is necessary to provide additional $1.6m^3/h$ for kW air supply at every hour and at each kW form the total heating power.

A ventilator for suction of the air from the room (desiccators, tumble driers, etc.) working at the same time with the cooker leads to change in the flue draught and consequently to bad burning conditions of the cooker. In this case for the proper burning to be achieved it is necessary to let additional air into the room.

4.5. Heating during the transitional period

For the good functioning of the cooker, it is necessary to achieve enough draught of the chimney. This depends on both its height and the ambient temperature. At temperature exceeding 14°C disturbances in the combustion caused by insufficient draught might occur. In this case it is necessary to load the cooker with less fuel and the regulators to be left open so that the fuel to be

burned faster (with flame) and thus reaching a stable flue draught in the chimney. In this case it is necessary to clean the ashpan more often.

5. Cleaning.

The right exploitation of the cooker requires regular cleaning of the chimney, the fluepipes and the cooker itself, from the soot and tar.

You can clean the ashtray only when the stove is cold.

Cleaning can be done when the top plates are removed and the surrounding steel plates around the oven are cleaned. The soot is collected under it. The bottom of the oven is movable and can be pulled out for complete cleaning. When the bottom plate is returned you have to ensure that the sealing is right.

Proper maintaining of the cooker can guarantee the good look of the product for a long time.

The surface of the cooker can be:

- With enamel finish. They can be washed with standard commercial cleaning materials, which are acid free and you can polish them with a soft towel.
- Painted with epoxy-polyester powder. They have to be cleaned by the same way like the enameled parts. In order to preserve the surface from damage this can be done only when the cooker is cold,
- Painted with heat-resistant paint. This surface can be cleaned with dry and soft brush.

Attention!

When cleaning do not use sharp objects and abrasive materials!

After using the oven it has to be cleaned when it is still warm and then to be dried. When needed, the glass of the oven can be cleaned only when it's cold, by washing it with soap solution.

The manufacturer keeps the right to make changes in design and construction without violating the technical and operational quality of the fireplace.

6. Important directions for fire-precaution and safety regulations.

Please observe the following requirements for fire-precaution and safety regulations.

The door of the combustion chamber should always be firmly closed even when the fireplace is not working. It should be serviced only by some operating tools or heat-resistant glove, which is placed inside the cooker.

The cooker should be installed only on a non-combustible floor. Under the oven door there is a niche with door (for Plamak, Plamak Lux, Plamak B, Plamak Lux B, Plamak B12 and Plamak Lux B12) and niche (for Metalik, Metalik M, Ognyana white enamel, Ognyana black enamel). They are decorative and storing easy inflammable materials in them is not allowed.

- The fireplace and the flue draught pipes should be at least 80cm away from combustible objects or constructions.
- Installation, repairs and adjustment of the water heating system should be done only by authorized organizations.
- Using easily inflammable liquids is not allowed at ignition.
- Vertical connection of flue draught pipes with the chimney through floor structures is not allowed.
- The presence of easily inflammable and explosive substances in the heated room is not allowed.
- The ash disposal and cleaning of the cooker should be done only at safe places and when the fireplace has cooled down.
- The cooker is designed for local heating of rooms with normal fire danger.
- It is prohibited to put combustible materials and objects on the fireplace or in immediate proximity of it.

- **The cooker is not designed to be used by children and persons with limited physical, sensuous and mental abilities, or by people with not enough experience and knowledge, except in cases when they are watched and instructed how to work with this type of heater, by someone who is responsible for their own safety. Incineration danger!**

We recommend the following instructions when there is a fire in the chimney:

- Close the combustion air regulator!
- Call the fire brigade in your neighborhood!
- Don't try to extinguish the fire with water by yourself!
- All easily inflammable materials to be away from the chimney!
- When the appliance is set to work again it is necessary the chimney to be checked by a competent person for eventual damages.

In cases when the cooker has been overworked above the permissible capacity and output, and/or fuels different from the recommended ones had been used, the manufacturer cannot guarantee for the smooth and perfect operation of the cooker.

Please complete regularly a full check of the functionality of the cooker with the help of a specialist. If there is need to replace some parts, you have to change them with parts provided and produced only by the manufacturer.

7. Possible defects and their causes.

At ignition the cooker is smoking (not enough flue draught pressure):

- The chimney and the flue pipes are not sealed;
- The chimney is with wrong size;
- If there is second appliance connected with the same chimney check the doors of the second product. They have to be closed;

The room can't be heated:

- Bigger heat is needed;
- Bad fuel;
- There is a lot of ash on the grate;
- The air supply is not enough;

The cooker releases too much heat.

- The air supply is too much
- The chimney pressure is really high.
- The fuel is too much or the fuel is very calorific.

There are damages on the grate:

- The cooker is overloaded many times;
- The used fuel is not from the recommended types;
- The primary air supply is too much;
- The chimney flue draught pressure is really high;

When the product does not work well:

- Open the regulator for the primary air. The regulator for the secondary air needs to be completely open;
- Put less fuel;
- Clean the ashtray regularly;
- The coals have to be well fired when you close the primary air supply;
- Check the chimney for blockage;
- Check if the fluepipe has entered the chimney;
- If the cooker is connected together with a second appliance in the chimney check the proper operation of the second product;
- Check if the needed pressure of the flue gas flow in your chimney requires the cooker characteristics;

- Check if the passage to the chimney is not closed with top cover.

Overheating the cooker:

- Close all air regulators. If it is necessary open the oven door.

The oven can’t reach high temperature:

- Check if the oven door is firmly closed;
- Open the air regulators.
- Use good, well dried wood material.

INSTRUCTION

for assembling and operation of
solid fuel cookers with integral boiler

Attention!

The design and connection of the heating installation should be obligatory made by an authorized organization. The installation should conform to all standard documents which are in force (in reference with the operation and safety).

The cooker with an integral boiler "Plamak B" which you have bought gives you the great opportunity of heating the nearby premises with radiators.

The maximum allowed temperature into integral boiler -85^{o}C.

Maximum working pressure -1 bar.

Tested pressure -2 bar.

Water pipe connector size -1''.

In the combustion chamber of the cooker there is an integral boiler with heat output according to Table 1.

When connecting the heating system the following rules and recommendations should be observed:

- Before connecting the installation, it is advisable to calculate the heat loss in the particular case. **In case of connecting loads with greater heat output, than the declared one in the referent appendix, a cooling down of the heating surfaces of the integral boiler occurs, which leads to condensation and pitching**.
- The installation should be connected to the atmosphere with an opened expansion container. Between the cooker and the expansion container not any blocking components should be connected. This system works under pressure of 1 bar.
- Deaeration in each branch and component of the installation should be ensured, in each moment of its operation, and the cooker as well.
- In the installation, immediately near the cooker, in the lowest point, drains tap not less than ½" should be mounted.
- All components of the installation should be ensured against freezing, especially if the expansion container or other parts of it are situated in non heated rooms.
- At installations with forced circulation, the pump should be ensured with long term power supply device – automatic mode /UPS/. We recommend the circulation pump to be switched on and switched off by means of thermostat, doubled with manual electric switch
- When an old installation is used, then it should be repeatedly washed from the accumulated filths, which could be precipitated on the walls of the integral boiler.
- The circulation water should not be drowned off the installation during the non-heating season.

For cookers with integral boiler it is better to clean the surfaces of the boiler from soot and resinous matters at least once a month.

By inserting appropriate isolation materials between the wall and the radiators you will achieve radiation heating whose advantages are proved.

This water heater provides another opportunity -installing a coil into the boiler, for warm sanitary water.

The manufacturer cannot guarantee the work of the heating installation, except for the cooker. The design and mounting of the heating installation should be done by an authorized and legal organization!

In case of incorrect connecting caused by increased pressure an inflation of the integral boiler a welding rupture occurs. The manufacturer does not take any responsibility for such defects.

INSTALLATION DIAGRAM
for solid fuel cookers with an integral boiler
type “B” (open heating system)

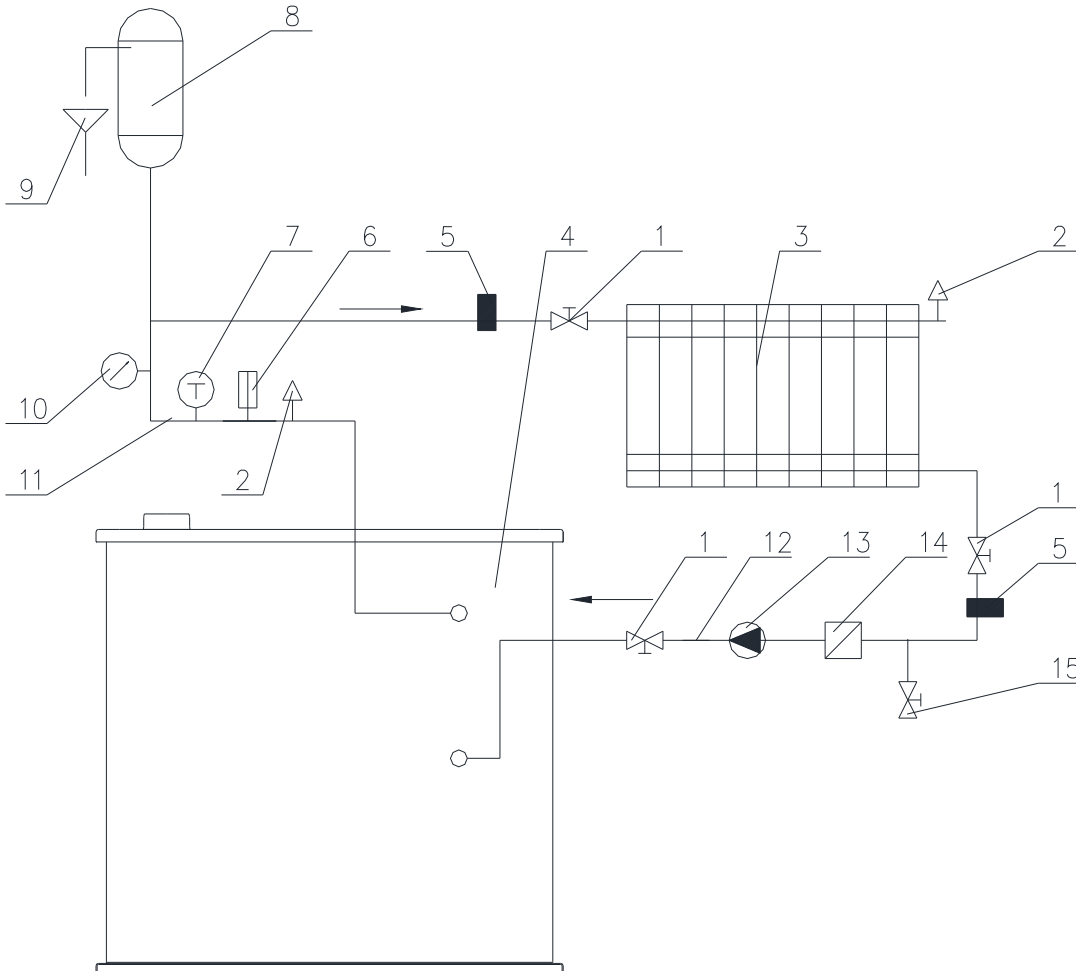

Fig.4

1.Valve
2.Deaerator
3.Radiator
4.Cooker
5.Flue spigot
6.Thermometer
7.Pump thermo regulator
8.Expander tank
9.Overflow drain
10.Manometer
11.Hot water pipes
12.Cold water pipes
13.Pump
14.Filter
15.Valve for filling and draining the system.