



TECHNICAL INSTRUCTIONS FOR CONCEPT 2 AND CONCEPT 2 MINI CENTRAL HEATING COOKERS

Dear Customers,

*We would like to thank you for your trust and to congratulate you since by this purchase you have become a member of voluminous family of satisfied buyers of company **ABC PROIZVOD**.*

We anticipate that soon you will be sure that you selected a quality and economic product, being a result of longstanding tradition of our company in the manufacture of central heating boilers and cookers.

If you have any doubts, concerns or inquiries, please do not hesitate to contact us, no matter where and from whom you purchased our product, we will provide you with our assistance bymeans of expert advice and technical support.

Yours Faithfully



Founded in 1990.

Prior to use of these central heating cookers, please read this manual carefully, since it provides you with information regarding safe installation, operation and maintenance of these devices.

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1. INTENDED USE AND SPECIFIC FEATURES OF CENTRAL HEATING COOKER

These cookers are intended for heating of premises via central heating utility as well as food boiling and roasting, by solid fuel feeding (coal or dry wood). Besides that, it looks like a fireplace owing to fire-resistant glass on the firebox door. The cooker may be connected to a utility with either open or close pressure maintenance system, with water temperature up to 90°C and max. working pressure of 2.5 Bars.

The cooker design allows easy fuel feeding and ash cleaning. Reliable operation is enabled, high degree of usability, as well as long life when following recommendations for accurate installation and exploitation, which we prove by a 5-year warranty.

All connections on the cooker (inlet-outlet lines, smoke tube, heat exchanger connector, etc) are standard, therefore not requiring any special adaptation during the connection.

IMPORTANT WARNING: During the operation, the cooker door has to be closed, otherwise an uncontrolled temperature rise may occur exceeding an allowed limit, which may cause damages on the cooker and utilities. Besides that, an unjustified increased fuel consumption may happen, as well.

2. SAFETY

2.1. SAFETY AND RELIABILITY IN COOKER OPERATION

These central heating cookers are designed and fabricated to provide the highest operation safety provided that the users comply with this **MANUAL** in all aspects.

No responsibility is taken for injuries to humans, animals, or property damages as a consequence of non-compliance with this manual.

Any other use of the cooker is considered incorrect and thus either hazardous, too, such as:

- Change of the cooker's intended use by solid fuel feeding but with no connection of hot water line;
- Drying of coal, wood, fire starters, other objects and animals in the oven;
- Drying above the hob of laundry, fuel and other flammable objects or objects which may fall onto the hob.



2.2 IMPORTANT SAFETY WARNINGS

1. The cooker has to be mounted and connected to central heating supply by authorized/qualified installer-technician in conformity with this manufacturer's manual. He provides the user/operator of the cooker with basic explanations out of this manual's contents.
2. This cooker may only be operated by a trained and skilled person. Children must not operate this cooker.
3. Stay away from hot surfaces and do not touch them. Keep children and the disabled people away from them.
4. Do not put anything that may cause an accident or damage (empty glass or enamel dishes, inflammable objects, deformed and unstable dishes which may fall over, etc) onto the hob. Ensure that handles of the dishes do not project from the hob, so that you may not move them accidentally.
5. Do not use or keep inflammable objects and volatile liquids in the vicinity of the cooker.
6. When using small household appliances in the vicinity of the cooker, ensure that their power cable do not touch the hot hob of the cooker.
7. Never put any objects or inflammable matters in the drawer below the oven (except wood for burning).

3. DESCRIPTION AND TECHNICAL CHARACTERISTICS

The cooker to which this MANUAL refers is designed for solid fuel (coal and dry wood) feeding. Besides that, it looks like a fireplace due to fire-resistant glass on the firebox door. It is made of certified boilerplate with proved chemical composition and mechanical features at higher temperatures. It is welded by means of most up-to-date welding procedures.

Testing of the cooker is performed with water under 3-Bar pressure.

The cooker has water-cooled grid, made of seamless tubes as well as ash ejector allowing efficient ash ejection from firebox into the ashtray. This enables a better fresh air supply to combustion area.

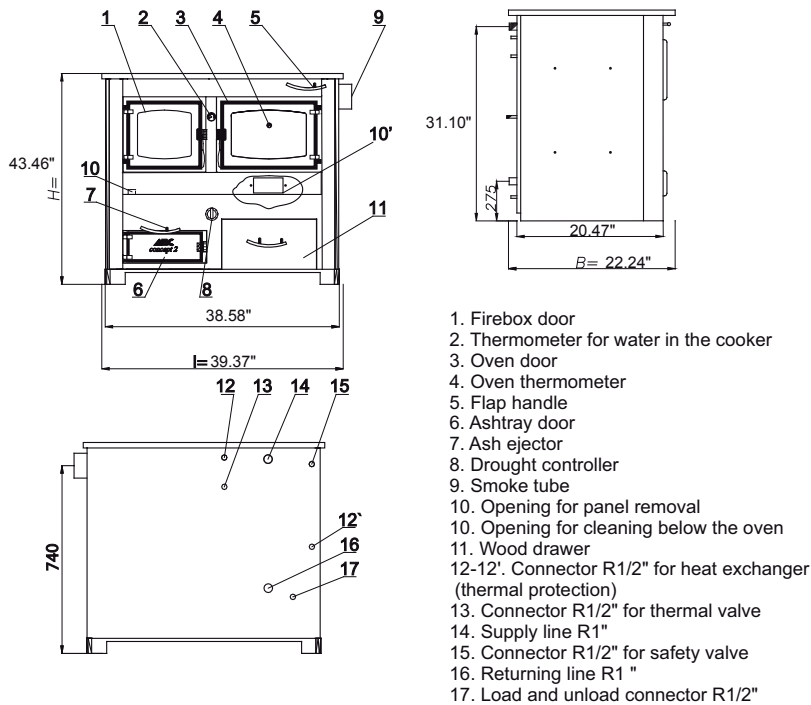
These types of cooker enable lifting the firebox together with the grid. Placement of this grid reduces heating capacity, therefore the cooker may be used to heat confined area, either. By firebox lifting, the effect of heating on the hob is improved without any losses of the desired temperature within the oven.

By the point of chimney connection, the cooker may be either left- or right-sided (lateral connection) or with hob connection. Concept 2 mini cookers are universal, left- or right-sided with the connection to the hob allowed. Before connecting the cooker to the chimney, one needs to remove sheet metal from lateral panel, detach protective sheet metal from the smoke tube (either on the left or on the right side, depending on the side you selected for connection to chimney), F.2, pos. no.18.



Standard connector on all our cookers is 145 mm. In case that this connector is not suitable for you, our factory in its product range may offer reducers converting the existing status into the following dimensions: 120, 130 or 150.

Picture number 1: STOVE FOR CENTRAL HEATING – Concept 2

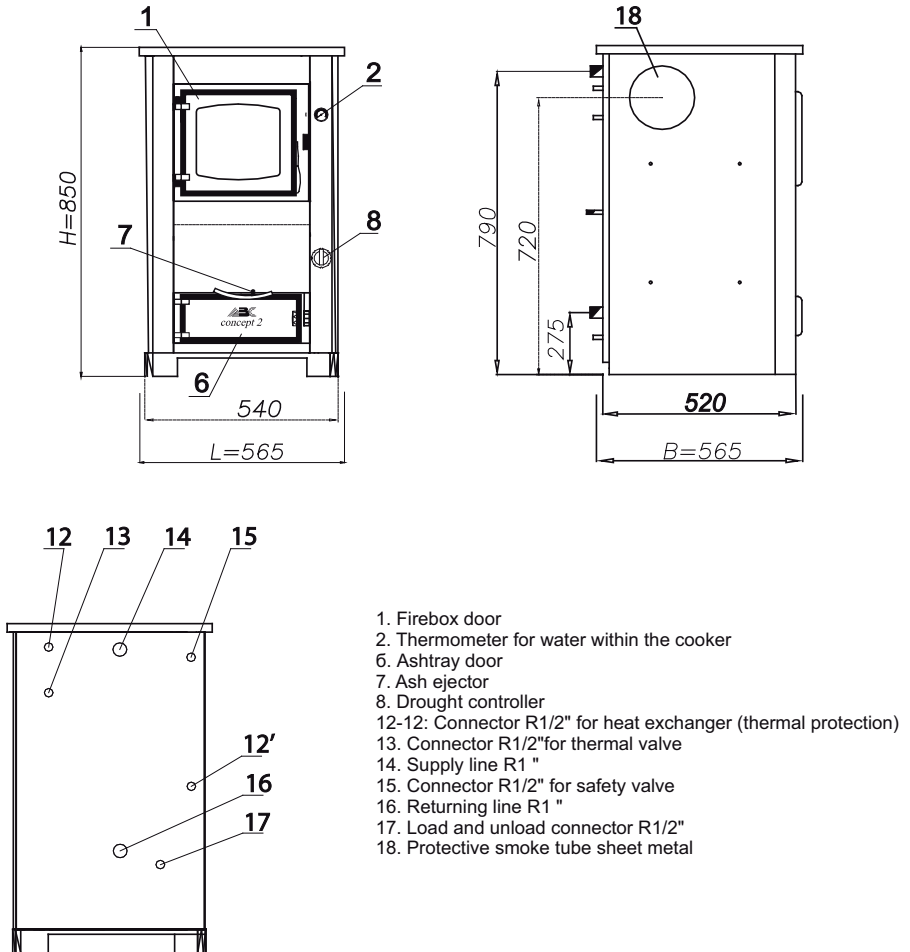


Technical details for all cooker types

TECHNICAL DETAILS	Concept 2		Concept 2 Mini	
Power transferred to water(kW)*	Coal 29	Wood 25	Coal 25	Wood 21
Required draught (Pa)	20		20	
Mass (total weight) (kg)	220		140	
Water volume (l)	32		32.5	
Max working temperature (°C)	90		90	
Max working pressure (Bars)	2,5		2,5	
Smoke tube diameter (mm)	145		145	
Width L (mm)	1000		565	
Height H (mm)	850		850	
Depth D (mm)	565		565	

* NOTE: Power emitted by the cooker by radiation in the room was not considered.

Picture number 2: CENTRAL HEATING COOKER - Concept 2 mini



4. TRANSPORTATION AND STORAGE

The cooker is protected with packaging which is not precipitation-resistant. It should be kept under covered area. Transportation to the user's destination is performed as agreed. When you remove the unit from the cooker, check for any accidental damages during transportation and manipulation. If you have any doubts regarding its functionality, contact your retailers or factory **ABC PROIZVOD** directly.

Keep packaging components out of reach of the children, since they may be hazardous.

5. PLACEMENT / INSTALLATION

Design, placement and central heating installation is mandatory to be done by a qualified person. In case of poorly designed system and possible defects in installation by mentioned person, which in turn may cause incorrect cooker functionality, solely the installer of heating system, not the manufacturer, representative or retailer of the cooker, bears both complete material responsibility and unexpected expenses.

The cooker may be placed in the kitchen or some other suitable area, under the condition that a non-flammable base, sufficient manipulation area, room ventilation and suitable chimney are provided.

When installing the cooker, take care about the following:

- a) Furniture and objects next to the cooker must not be made of flammable materials, otherwise their distance from the cooker has to be min. 20 cm.
- b) Under no circumstances can the shelves or similar wooden furniture be placed under the cooker hob
- c) The wall which is in contact with the back of the cooker has to be made of a heat-resistant material
- d) Do not place curtains directly behind the cooker, when placing them laterally, they should be placed as far as possible
- e) Flammable materials, f.e. door frames, wallpapers have to be at least 20 mm away from smoke tubes. This distance may be reduced if appropriate thermal insulation is installed around smoke tubes.
- f) Place the cooker in horizontal position or lift the back of it slightly (2-4 mm).

5.2. CONNECTION TO CHIMNEY

As an essential component of central heating system, the chimney has to have an appropriate cross section, and to be duly installed, correctly placed above the roof and insulated (F.4).

Determination of the size and check of the existing chimney is performed by the designer of central heating utility based on the cooker capacity, fuel type of required draught for selected cooker.

The cooker reaches the declared power only in case of appropriate size of the chimney.

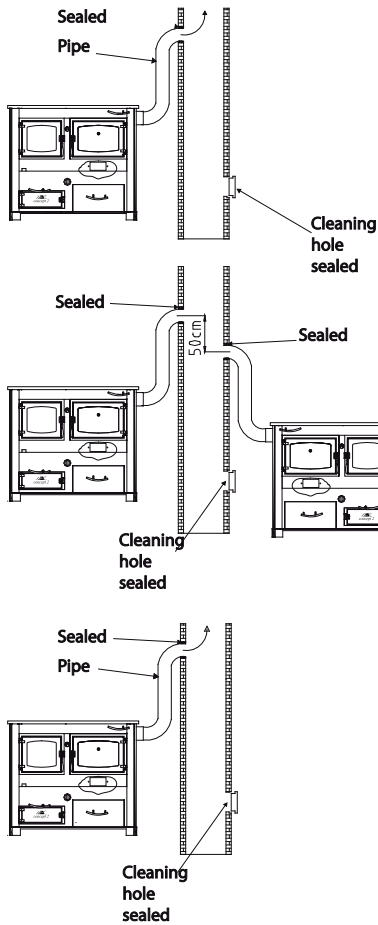
All smoke tube joints from the cooker to the chimney have to be properly sealed. F.3.

The chimney needs to be duly placed above the roof as per the instructions presented in F.4. Avoid the placement of chimney caps, especially if with lateral blinds. In case of possible placement of a chimney cap, act as recommended in F.4. .

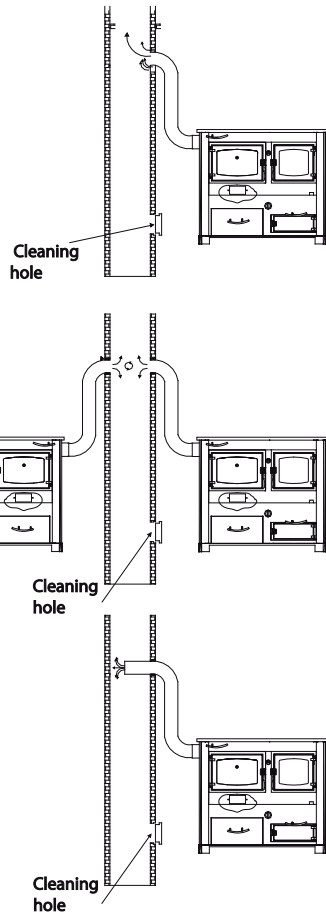


Picture 3 Connection to chimney

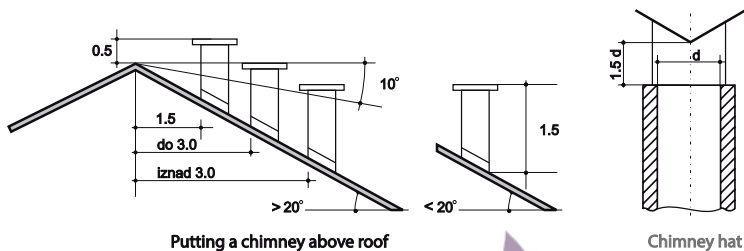
Correct cooker connection to chimney



Incorrect cooker connection to chimney



Picture 4. Chimney installation above the roof and chimney cap placement



5.3.INSTALLATION

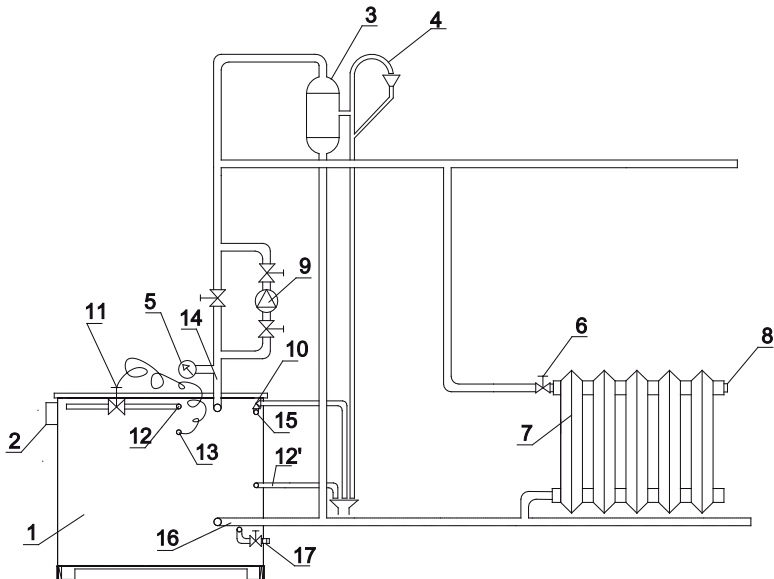
Central heating cooker may be connected to open system (F. 5) and to closed system (F. 6) of central heating utility, since the cooker has built-in thermal safety feature – a heat exchanger. Thermal valve is not delivered with the cooker.

Preferably connect the cooker to open central heating system, and connection of a thermal valve with a probe to the cooker is however mandatory as well as connection of the heat exchanger to water supply network. **Warranty shall be void without the thermal valve connection.** All cooker joints need to be properly sealed, which should be visually checked before commissioning.

A final step in the mounting procedure is to fill the cooker and all the utilities with water up to the required pressure.

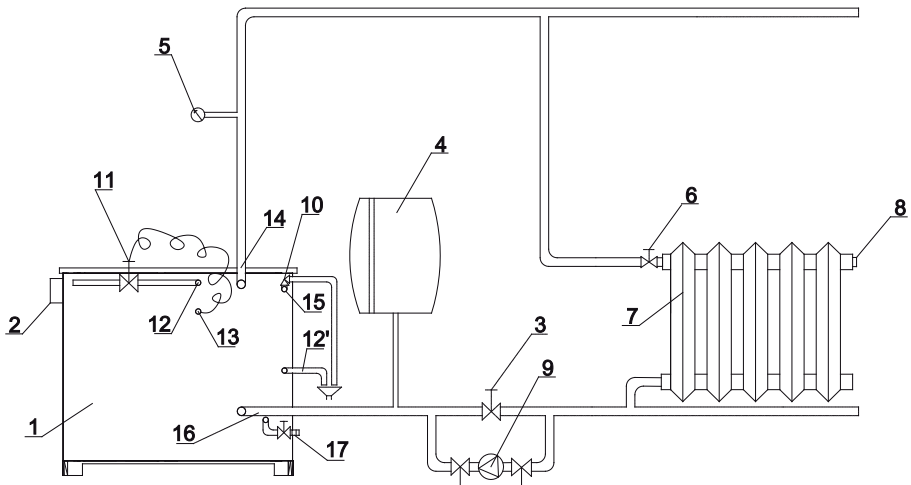
DO NOT USE THE COOKER WITHOUT WATER.

Picture 5 Scheme of cooker connection to open central heating system



- | | |
|--------------------------|------------------------------------|
| 1. Cooker Concept 2 | 10. Safety valve |
| 2. Smoke tube | 11. Thermal valve |
| 3. Open expansion vessel | 12. Water supply connection line |
| 4. Discharge pipe | 12'. Hot water drain |
| 5. Manometer | 13. Thermal valve probe |
| 6. Radiator valve | 14. Supply line |
| 7. Radiator | 15. Safety valve connector |
| 8. Air valve | 16. Returning line |
| 9. Circulation pump | 17. Load and unload connector 1/2" |

Picture number 6
Scheme of the cooker connection to closed central heating



- | | |
|----------------------------|------------------------------------|
| 1. Cooker Concept 2 | 10. Safety valve |
| 2. Smoke tube | 11. Thermal valve |
| 3. Valve | 12. Water supply connection line |
| 4. Closed expansion vessel | 12'. Hot water drain |
| 5. Manometer | 13. Thermal valve probe |
| 6. Radiator valve | 14. Distribution line |
| 7. Radiator | 15. Safety valve connector |
| 8. Air valve | 16. Returning line |
| 9. Circulation pump | 17. Load and unload connector 1/2" |

6. OPERATION – FUEL FEEDING

Solid fuel has to be physically separated from the cooker by means of spatial and physical barrier. Ashtray needs to be made of non-flammable ingredients and it has to be placed away from fuel storage area.

INITIAL FUEL FEEDING

The following conditions need to be met at the initial fuel feeding:

- chimney has to be clean and duly connected with the cooker,
- the cooker and heating utility need to be equipped with all safety devices,
- at the initial fuel feeding, pull the flap handle, F.1, pos. 5 (Cooker Concept 2), completely, for more convenient passage of additional cold smoke gases , and once the desired temperature is reached, return the handle into the suitable position, depending on operating mode,
- fill the system with water and remove the air
- in cooker operating mode, firebox door and ashtray door need to be closed,
- set the automatic drought controller button to the desired value,
- max. cooker working temperature is 90°C.

IMPORTANT NOTE:

First fuel feeding may cause condensation – water drops and humidity in the ashtray. In this case, increase the cooker temperature gradually and this phenomenon will disappear.

6.2. OPERATION

The cooker is fed with fuel as all the other continuously burning solid fuel boilers. The fire is started with the ashtray door open. Having opened the firebox door, put the paper and small pieces of wood on the grid and start the fire. Put the heating material gradually into the firebox until the fire intensifies. Only then fill the firebox, close the ashtray door and set the drought controller to the desired temperature.

6.3. USE OF GRID

The cooker has water-cooled grid, made of seamless tubes as well as ash ejector, F.1 and F.2, pos. 7, allowing efficient ash ejection from firebox into the ashtray. This enables a better fresh air supply to combustion area. The cooker also has a feature that the firebox may be lifted with the grid, which is placed on suitable holders.

The grid is an accessory, and if desired, the customer may either purchase it directly from the manufacturer or order it through a distributor. This grid is intended for use in a transitional season, when external temperature is not too low. Placing this grid, the heating effect on the hob is enhanced, and thus food is boiled and roasted faster, and the cooker may also be used for heating confined premises.

6.4. TEMPERATURE CONTROL

On the cooker panel, F.1 and F.2, pos. 8, a drought controller is installed, which function is to set the desired temperature, and it consists of a numerical wheel with 0-8 scale, then of controller flap and capillaries. A thermometer is installed on the cooker, F.1 and F.2 pos. 2, showing the water temperature in the cooker. By means of capillaries, the drought controller (as well as the thermometer) is connected with the probe from which it collects the details about water temperature value in the cooker.

The cooker temperature is the lowest when the drought controller is set to no.1, and it is the highest when the drought controller is set to no 8. When the cooker temperature starts to fall, the controller flap is open automatically by 3-5 mm, allowing the flow of secondary drought (air) and better combustion up to the desired temperature. the drought controller settings depend on the desired area temperature.

IMPORTANT NOTE:

For correct functionality of the drought controller, connect the cooker to the chimney with stipulated dimensions.



Clean the space between controller's flap and airflow hole occasionally and remove ash and other burning products' debris. Avoid low water temperatures in the cooker of 50-60°C, since condensation may occur. If you observe water accumulation in either cooker or in the ashtray, simply increase cooker's operating temperature.

6.5 FOOD BOLING, ROASTING AND FRYING

During the season of heating, the cooker is used for food heating, boiling, roasting and frying. For faster cooking, roasting and frying, use dry wood as a fuel. For reaching the oven temperature of 250°C required for roasting, dry wood has to be used as a fuel and drought controller (F.1, pos.8) should be set to maximum (no. 8 in the scale). If required, in order to reach desired temperature in a faster and more efficient way, you may open the ashtray door.

IMPORTANT: Do not leave the product with the door open unattended, since an uncontrolled temperature rise exceeding an allowed limit may occur.

7. TROUBLESHOOTING

Technical disturbances may occur for the following reasons:

- a) possible factory faults – in that case, refer to the manufacturer, company "**ABC PROIZVOD**",
 - b) fitting, installation and connection faults – in that case, refer to the installer,
 - c) as a consequence of incorrect operation, user's failure to comply with a correct mode, heating and maintenance of the cooker – in that case, study this manual and take correct steps.
- If the problem persists, the user should refer to factory "**ABC PROIZVOD**" for a piece of advice/intervention.

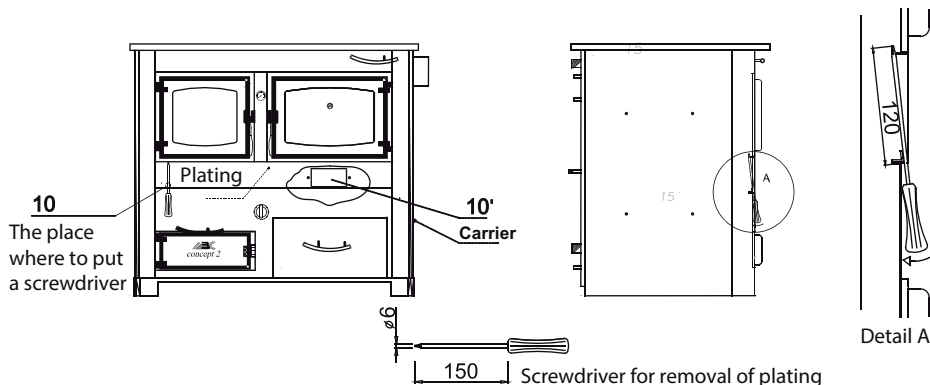
8. CLEANING AND MAINTENANCE

To extend the life of your cooker and for its correct functionality, accurate cooker maintenance is required, both during heating season and after. Daily cleaning of ash area and airflow hole below the flap is required. Periodically remove soot from the cooker, at least once monthly, since deposits of soot and pitch in the interior of the firebox of the cooker increase fuel consumption and decrease usability level. The manufacturer recommends the usage of chemical agent **ASTRATHERM**, which facilitates mechanical removal of deposits of combustion products.

Do not use wire brush or wire sponge for cleaning exterior of the cooker, oven and rings since it may damage protective layer, but use a cloth damped with a mild cleaning agent. Clean the oven after each use.



Picture number 7 Panel disassembly for cleaning soot below the oven



The opening, pos. 10', F. 7 is designed for cleaning the soot below the oven. The panel is fastened to a clip and is easily removed by a lever principle (f.e. with a screwdriver). On a suitable place (F.7, pos. 10), on the bottom of the panel, on the left, there is an opening. Put the screwdriver into the opening and place it under the panel by 120 mm, press it down (lever principle) and the panel will be detached from the clip. Remove the panel gently from the small column on the right. Remove protective sheet metal and gasket from the opening intended for cleaning the soot below the oven. When cleaning is complete, replace the gasket, protective sheet metal and panel.

The cooker cooling by means of watering the firebox is forbidden.

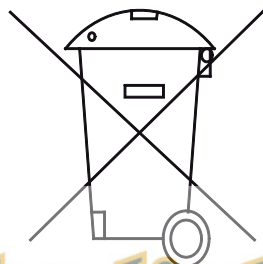
Once the heating season is over, clean the cooker thoroughly and completely. Drain the water only if some utility repairs are required.

Upon the completion of the heating season, the manufacturer recommends a linen bag with 1-2 kg of grinded quicklime to be suspended within fuel feeding area.

9. DISASSEMBLY AND DISPOSAL

At the end of the product's life, remove power supply, water supply and heating connections, drain water and handle the product to an authorized waste collection/recycling point.

In compliance with the European Directives, the symbol of "**crossed recycle bin**" (see the Figure on the right) warns you that you are committed to treat unusable products with a special attention.



10.ADDITION

ACCORDANCE WITH EU DIRECTIONS AND STANDARDS

THESE STOVES ARE MADE BY DIRECTIONS OF EUROPEAN COMMUNITY:

97/ 23/ EC – Equipment under pressure

92/ 42/ EEC - Heaters for hot water

93/ 68/ EEC - Heaters for hot water

ACCORDANCE WITH INTERNATIONAL STANDARDS

The company “ABC PROIZVOD” in 2007 introduced a quality management system JUS ISO 9001/2008, which is maintained and improved. Since 2013, two additional standards were introduced. SRPS OHSAS 18001/2008 and SRPS ISO 14001/2005, so the company possesses an INTEGRATED QUALITY MANAGEMENT SYSTEM which is certified by an accredited body.



WARRANTY

Company “**ABC PRODUCT**” is giving guarantee for its products as per guarantee given when the products get sold. Dear customers, in case you are not satisfied with our product, please check the following before you decide to get in touch with us:

1. Did you do everything as suggested by INSTRUCTIONS when installing it:
 - choice of power of stove in correlation to the scored and projected capacity of the heating;
 - height, Ø , insulation of chimney, especially if the chimney is built up next to the building;
 - regular use of other parts of heating installations, which can have effects on use of the stove;
 - coverage in case of lost of electricity supply;
 - coverage of stove by implementation of term vents with sound and connection of heat exchanger to the water supply.
2. Are you using suggested heating regime and regime of maintaining stove temperature in aspects of:
 - proper choice of heating – gradual heating - compulsory closer of ashtray;
 - ash shaker use.
3. Are you doing all to keep the product without ash and tar from the insides of stove and chimney?
4. Did you do anything on your own initiative to change the product?

All above mentioned can have an effect on your guarantee's rights, durability of the stove and installation and exposure to the unnecessary cost in case of unnecessary visit to do the service when you call us.





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