



A.D. METALNA INDUSTRIJA VRANJE

Radnička br: 1

Solid fuel stove

FUTURO L



INSTRUCTIONS FOR INSTALLATION, USE, AND HANDLING



This product meets the requirements of the Ecodesign Directive in terms of efficiency and air pollution level, in order to contribute to the reduction of energy consumption and negative environmental impact.

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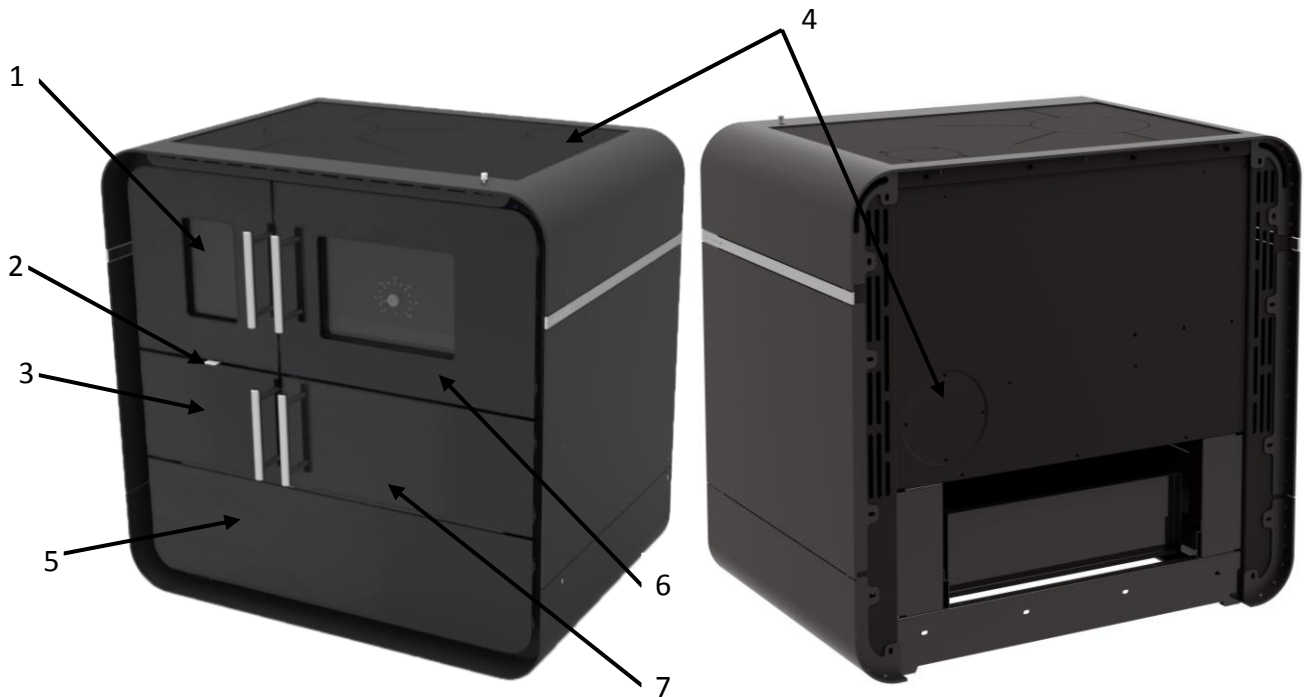


Figure 1

Solid fuel stove FUTURO L

- 1. Firebox door,
- 2 Slide shutter handle (air control),
- 3 Ashtray cover,
- 4 Flue pipe connection,

- 5 Drawer for dishes,
- 6 Oven door,
- 7. Cover for the opening for cleaning.

CAUTION!	
	<p>SURFACES CAN BE VERY HOT! ALWAYS USE A PROTECTIVE GLOVE!</p>

During combustion, thermal energy is released, which significantly influences increasing temperatures of surfaces, doors, handles, glass and exhaust gases. Avoid contact with those elements if you are not wearing protective equipment (including a protective glove). Ensure that children are aware of the risks and keep them away from the stove during operation.

INSTRUCTIONS FOR INSTALLATION, USE, AND HANDLING

These instructions for installation, use and handling apply to the **FUTURO L** stove.

When using the stove, you have to comply with national and European norms and regulations.

Important prior to use:

* To have your stove operate properly, you should attentively read this manual and adhere to the instructions contained therein.

* Use only recommended fuel types (beech).

* The required pressure in the chimney with normal work load should be approximately 12 Pa. A damper should be installed in the stove-pipe at the pressure of more than 15 Pa.

* The area where the appliance is installed should have satisfactory fresh air supply. If the windows and doors are well sealed, or if other air-consuming appliances such as a steam cleaner, a tumble dryer, a fan, etc., are installed in the area where the stove is placed, and take air, in such circumstances, air for combustion (fresh air) should be led from outside.

Concerning this, it is necessary in any case, prior to installing the stove, to consult a competent chimney sweeping organisation.

* Flammable materials should not be stored in the ashtray.

Height of the filled ash should not exceed the height of the lateral walls of the ash drawer.

***The door of the fire-box should be closed at any time (except during ignition, refuelling and removal of ash) in order to prevent leakage of gases from firing.**

* **Replacement parts, other than our tested original parts, must not be used on the stove.**

***If the chimney catches fire, the door of the stove should be kept closed and the air control set on zero. Never try to extinguish the burning chimney with water.**

The sudden creation of steam can result in the chimney cracking. If necessary, call the fire brigade.

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1. TECHNICAL CHARACTERISTICS OF THE STOVE

	FUTURO L
Rated heating capacity (kW)	5,33 kw with split logs
Waste gas temperature (°C)	156 with split logs
Necessary pressure in the chimney (Pa)	12
Stove dimensions (width x depth x height)	866 x 600 x 860
Oven dimensions (width x depth x height)	330 x 440 x 260
Flue pipe diameter (mm)	120
Height from the floor to the flue pipe axis	435
CO (%)	0,091 with split logs
Efficiency degree (%)	78,24 % with split logs
Weight (kg)	185

2. STOVE INSTALLATION

When installing the stove, pay attention to the applicable regulations and provisions concerning construction and fire. Installation of the stove must be made by a specialist. Connection of the stove to the chimney is enabled on the top right and the rear sides of the stove. Ensure that the place on which the stove is installed is horizontal. In case the floor is flammable (wood, plastic, carpet), use a steel sheet, copper sheet or a sheet of other non-flammable material. That base should exceed the basic contours of the stove by at least 30 cm, with 50 cm excess at the handling side.

Distance on all sides, in relation to pieces of furniture of wood or plastic, shall be at least 20 cm **and at least 30 cm laterally**. Inbuilt parts made of flammable materials should be a distance of at least 80 cm from the opening for fuelling of the stove towards the sides.

Safety distance with items that should be protected (walls that can catch on fire, kitchen cupboards and support walls of steel concrete) is at least 20cm and laterally 30 cm.

Sufficient distance in relation to flammable items (that have wooden coating, furniture, curtains, etc.) should be ensured around the stove.

When using the steel plates of the stove, superstructures are not allowed above the stove. When moving the waste gas discharge pipe, a minimum distance of **40cm** should be kept in relation to flammable matters:

Before connecting the stove to the chimney, you should obligatorily consult a chimney sweeper organisation.

Connection of the stove to the chimney should be made with adequate connection parts, in line with SRPS.M.R4.031 (DIN 1298. or DIN EN 1856-2).

Care must be taken to ensure that the connection terminal for the chimney and the flue pipe are not in the cross-section of the chimney gases and should be sealed to each other.

EN 13384 applies for the measurements of the chimney.

If your stove is to achieve the desired capacity, you have to ensure that installation is properly performed and, above all, the chimney works impeccably. In any case, you should control the existing pressure in the chimney before putting the stove into operation.

You will control the chimney draught strength in the simplest manner if you hold a lit candle beneath the chimney opening. The draught is sufficient if the candle flame sways towards the chimney opening.

Weak swaying of the flame is a sign of a weak draught.

If two heating appliances are installed on the same floor onto one chimney (multifold loading), the distance between the connections may not be smaller than 50 cm.

3. HANDLING

3.1. ASHTRAY HANDLING

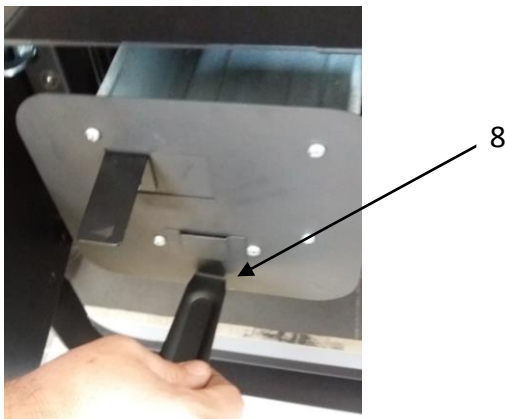


Figure 2

A special key is used to remove (lift up), take away and return the ashtray over the support of the ashtray as shown in figure 2., item 8.

3.2. AIR CONTROL

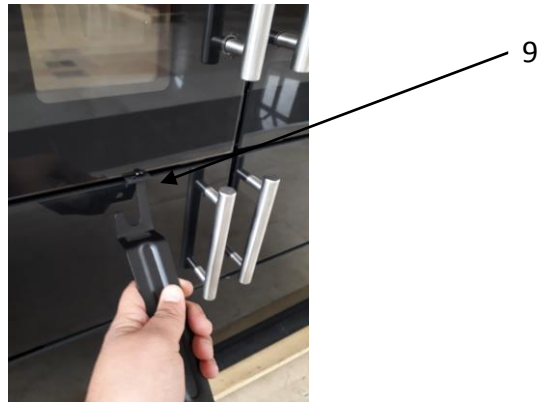


Figure 3

We make air control with a special key over the slide shutter handle as shown in Figure 3 item 9.

3.2.1. PRIMARY AIR

Primary combustion air, and thus the heating capacity of the stove, is determined through the primary air opening. That air is controlled on the ashtray support through the slide shutter for the primary combustion air (Figure 1, item 2).

The slide shutter handle on the ashtray support (Figure 3, item 9), shows the direction of the opening and closing of the slide shutter. For igniting, the slide shutter handle should be opened to the maximum.

Note: To prevent overheating of the stove, a larger quantity of fuel than 1.8 kg dried wood per hour at adequately set air combustion is not allowed.

3.3. Heating stopple

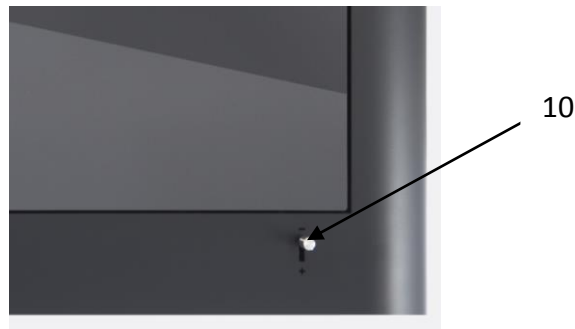


Figure 4

Starting the heating stopple is made through the handle (Figure 4, item 10) located above the oven door. It serves to shorten the flue gases paths during fuelling. The coating features symbols "+" and "-", which determine the open and closed positions of the heating stopple.

The heating stopple should be opened only in the stove igniting phase.

During fuelling, if the heating stopple is opened, overheating of the stove can occur and thus damage of parts of the stove. In addition, the opened heating stopple results in higher consumption of fuel.

Handle set in the "+" position = heating stopple is opened,

Handle set in the "-" position = heating stopple is closed.

3.4. Oven door (Figure 1, Position 6)

The oven door can be in one of two positions at one's choice, depending on the desired heat the room should have.

Oven door opened: higher emission of heat for room heating.

Oven door closed: lower emission of heat for room heating.

3.5. Oven door (Figure 1, item 5)

An area for fuel is placed in the lower part of the stove and opening and closing of the drawer is envisaged through telescope guides.

Attention: Easily flammable materials, such as paper etc., should not be stored in this area. Care should be taken of the height at loading.

4. PUTTING THE STOVE INTO OPERATION

Before first ignition, all enamelled and varnished surfaces should be wiped with a soft and dry cloth to prevent staining.

The stove can first be put into operation after one's getting to know the manner of handling the stove. At the first fuelling, open the window because the applied corrosion protection develops, for a short while, unpleasant but insignificant flue or an unpleasant smell is developed. That is normal and shall vanish after a short time. Consider that some inbuilt parts of the stove (waste gas discharge pipe, loading door, etc.), when the stove is burning, can be hot and pose a risk of burns. Special care should be taken to ensure that small children are not put at risk.

At the first loading, fuel the stove with two or three weak fires to disable the chamotte cracking.

4.1. Fuelling

- * Set the stopple handle in the "+" position, the heating stopple is opened
- * Open the slide shutter handle for primary air at the greatest air release (Figure 3, item 9)
- * Open the firebox door
- * Put wooden wool, wooden sawdust or paper
- * Put 2-3 small pieces of wood over it
- * Ignite
- * Close the firebox door
- * Let the wood burn briskly
- * After ignition, set the heating stopple button into the "-" position, the ignition stopple is closed.

4.2. Refuelling

After the basic ember is created, fuel should be added in the opening for loading. The slide shutter handle should be set in the adequate place. When refuelling, be careful to open the firebox door slowly so that fuel gases are not drawn and, thus, you will avoid flue gases entering the room. The rated heating capacity is achieved when you use the following quantities of fuel and adjust:

Fuel	Quantity of fuel	Time of combustion	Adjusting primary air
Slit logs	1.58 kg	1 h	Degree 1/2

Ensure that higher quantities of logs than necessary for the rated heating capacity are never loaded. The above quantity of fuel should not be exceeded because overheating of the stove can occur.

Only naturally dried wood can be used according to the regulation on emission protection. Wood that is used must be dry (residue of moisture, 20%). This is usually case if the wood is stored for two years in a dry place where there is a good draught.

Wet wood has a low calorie value and leads to deposits of soot in flue canals and the chimney.

Wood with a treated upper surface (varnished, painted, veneered and impregnated), plywood, waste of any kind, packaging waste, plastic, newspapers, rubber, leather, textile, etc., must not be fuelled.

Combustion of such matters pollutes the environment and is prohibited by the legislator. Furthermore, damages to the chimney can occur. In that case, any warranty from the producer will be annulled.

Under unfavourable circumstances and insufficient draught, some obstacles can appear in the chimney in a way that flue gases are not discharged in full. In that case, reasons in the chimney should be removed, otherwise, use of the stove is not allowed for security reasons.

Note: Better fuel efficiency and thus better heating of the area is achieved by opening the door of the stove a little or in full.

4.3. Cooking

4.3.1. Cooking in the summer

During hot days, the solid fuel stove is mainly used for cooking. The stove door is kept closed. It is best if you use a pot with a reinforced bottom and adequate lids.

4.3.2. Cooking in the winter

During cold days, the solid fuel stove is mainly used for room heating. For faster cooking, dry wood should be used.

The heating stopple must be closed, and the air control opened to the maximum.

After finishing the cooking, the air control should be set at the place for the rated heat capacity.

4.4. Baking of cakes and meat roasting

Baking of cakes and meat roasting require equally distributed heat. To achieve this equal distribution and sufficiently high temperature, the stove door must be closed. Depending on the type of dish that is baked/roasted, the oven should be pre-heated. If the stove is heated to the desired temperature, put the items that should be baked/roasted in the oven. Do not allow creation of very strong embers and always add fuel in small quantities. High cake moulds should be put on the lower rack of the oven. All cakes with such a form should be baked at moderate temperature. Both racks can be used with flat cakes or pastry. Somewhat higher temperature of the oven is then recommended.

You need a significantly higher temperature for meat roasting than in case of cake baking. Thus, the time of preparation (pre-heating) is somewhat longer and is necessarily required.

4.5. Fuelling in the transition period

With an outside temperature of more than 15°C, a little fire occurs in the chimney as a result of low transport pressure. This creates more soot in the flue canals of the stove and in the chimney. Increase the inlet of primary air, tending the fire more frequently and refuelling (small pieces of slit log) more frequently so as to decrease soot in the transition period.

5. MAINTENANCE AND CLEANING OF THE STOVE

Regular maintenance and care, such as the cleaning of the stove, flue pipes and flue pipe extensions, are important for safe operation and cost-effectiveness.

Maintenance of enamelled surfaces of the stove is only recommended when the stove has cooled down.

The stove should be cleaned with pure water and soft cloth and with soap in special cases. Cleaning intervals depend on the use of fuel, the time in which the stove was used and the way of use. Unnecessary creation of dust can be avoided if the following cleaning order is complied with:

- * Remove the cooking plate and clean it thoroughly outside.
- * Clean the soot and deposits from the upper part of the stove and where heating gasses pass.
- * Install the plate
- * Open the protective cover for cleaning (below the stove door) and remove the cover
- * Remove soot and ash from the partition sheet.
- * Remove soot and ash from the bottom of the stove
- * Fasten the cover at the front and close the protective cover again.

NOTE:When firing the stove, take care that the glass of the firebox door is not stained by soot. Soot occurs due to bad combustion, for several reasons.

Draught in the chimney is bad (bad chimney), the stove is not used correctly, for example: the supply of oxygen is suppressed too early. We do not have influence on those factors. Therefore, we do not give warranty for clean glass.

5.1. OPENING FOR CLEANING



Figure 5

A cover is located behind the protective cover of the opening for cleaning (Figure 5, item 11). It is fastened with one butterfly screw at the front side of the stove and should be removed to clean the inside of the stove.

Before screwing it on again, the sealing braid that is on the cover should be controlled concerning whether it seals and if something should be changed.

5.2. MAINTENANCE AND CLEANING OF THE COOKING PLATE

For maintenance of the cooking plate, it is recommended for the cooking plate to be greased from time to time with oil that does not contain acids.

Only fine sandpaper or an abrasive detergent should be used for cleaning the plate. After cleaning, the plate should be wiped with a half-wet cloth and finally with a dry cloth. Pay attention that the fugas for extension of the cooking plate are free, without deposit, to enable extension of the plate under the influence of heat.

Burnt residues of food or parts of slag in fugas can cause deformation of the cooking plate. Do not leave pots or pans on cold cooking plates. Edges with corrosion that is hard to remove can be created.

5.3. REMOVAL OF SLAG AND ASH

Slag is removed with the supplied accessories, a shovel. The ashtray should be emptied regularly before any ignition.

The grid should be cleaned once to twice a week. If the air vents are clogged with slag, burnt deposit or other burnt residues, remove the grid completely and clean it.

6. GENERAL NOTES

If you observe the instructions for installation and handling, the stove is a reliable home appliance. Any deficiencies of your stove can be removed by our maintenance service. In case of complaints concerning errors that occur or deficiencies in relation to functionality, refer to our maintenance service. It also assists with procurement of spare parts (use only original parts).

The whole installation for fuelling must be controlled regularly by a specialist.