



**SOLID FUEL
RANGE COOKERS**

TYPE 9100

TYPE 9103

**OPERATION & MAINTENANCE
MANUAL**

INSTALLATION MANUAL

OPERATION & MAINTENANCE MANUAL

Dear customer,

Thank you for purchasing of the appliance KVS MORAVIA - solid fuel range cooker. We trust that our product serves you well. Some important principles should be observed during its operation. Therefore, in your interest, carefully study this manual and operate the product according to the given instructions. The 9100 and 9103 appliances have a manufacturer issued declaration of conformity according to Section 12, Article 3, of Law No. 22/1997 of the Czech Republic.

Important Information, Binding Instructions and Recommendations

- Flammable fluids should never be used to fire up or increase the heat output of the cooker.
- Do not burn waste in the cooker, use only recommended fuel types.
- The ash door should always remain closed when the cooker is in operation. The burner door should be open only when re-fuelling or attending to the fuel in order to prevent burnt gases escaping.
- Remove ashes into fire-proof containers with lids! Be extremely careful when dealing with hot ashes.
- Pay attention to fire safety!
- Do not use the appliance if it becomes faulty!
- If operation instructions are not followed, the cooker could be damaged. Do not attempt to overwork the appliance. If the temperature in the oven surpasses 300°C, the temperature gauge may stop functioning correctly and suffer damage.
- **If metal panels produce strong sounds or fireclay degrades within the unit, these are not subject to repair or claim. The reason for the sounds will be internal flexing of metal sheets due to heat, they will eventually return to their original state once cooled. This does not affect the safety or operation of the cooker.**
- Any repairs, except cleaning or removing fireclay should be carried out by a professional.
- All local regulations, including the rules on national or European standards, should be observed during the installation.
- Use only spare parts approved by the manufacturer.
- Unauthorized repairs of the cooker are not recommended and will render guarantees and warranties void.
- The cooker should be attended only by an adult. While in operation the cooker should be attended and checked regularly.

Declaration

KVS EKODIVIZE, a. s. declares that the hygienic characters of the baking accessories intended for contact with foodstuff under all normal conditions, or by the stated use of the manufacturer, comply with the requirements of Law No. 258/2000 Coll., the Ministry of Health Decree No. 38/2001 Coll., and Regulation No. 207/2006 Coll. of the Czech Republic.

KVS EKODIVIZE, a. s.
Chairman of the Board of Directors

Technical Specifications – TYPE 9100

The appliance – Range Cooker TYPE 9100 has been designed for solid fuel combustion in periodic feed rates and it is intended for cooking and baking in households and/or for heating the space in which it is situated, according to the ČSN EN 12815:2002 Standard as amended A1:2005. The appliance can be connected to a chimney from the back, both sides or from the top by means of a hole in the Hob-Top (Drawing 5). It is available in either left or right versions. The appliance is suitable for short operational periods, so it is not possible to set the permanent-heat process with a shortest interval of fuel supply of 10 hours.

Range Cooker

Nominal Heat Output (NHO)

- Summer Regime
- Winter Regime

Efficiency at NHO

Burnt Gases Average Temperature at NHO

Burnt Gas Flow Weight at NHO

Approx. Concentration of CO at HNO (O₂ = 13%)

Minimum Chimney Draught

Flue Pipe Diameter

Distance from the floor to the centre of the flue socket

Hob Top Dimensions

Tested fuel

Average Fuel Consumption

Weight

TYPE 9100

wood	coal	
6 Kw	6 kW	6 kW
6 kW	6 kW	6 kW
78,5 %		
210 °C		
8,7 g/s		
0,04 %		
12 Pa		
120 mm		
735 ±0,5 mm (28,93 inch)		
0,37 m ²		
wood (size 200 – 330 mm)		
2-3 kg/hour		
155 kg		

Dimensions of the Range Cooker:

Height (distance from floor to hob top panel)	850 mm (33,46 inch)
Width	924 mm (36,37 inch)
Depth	600 mm (23,62 inch)

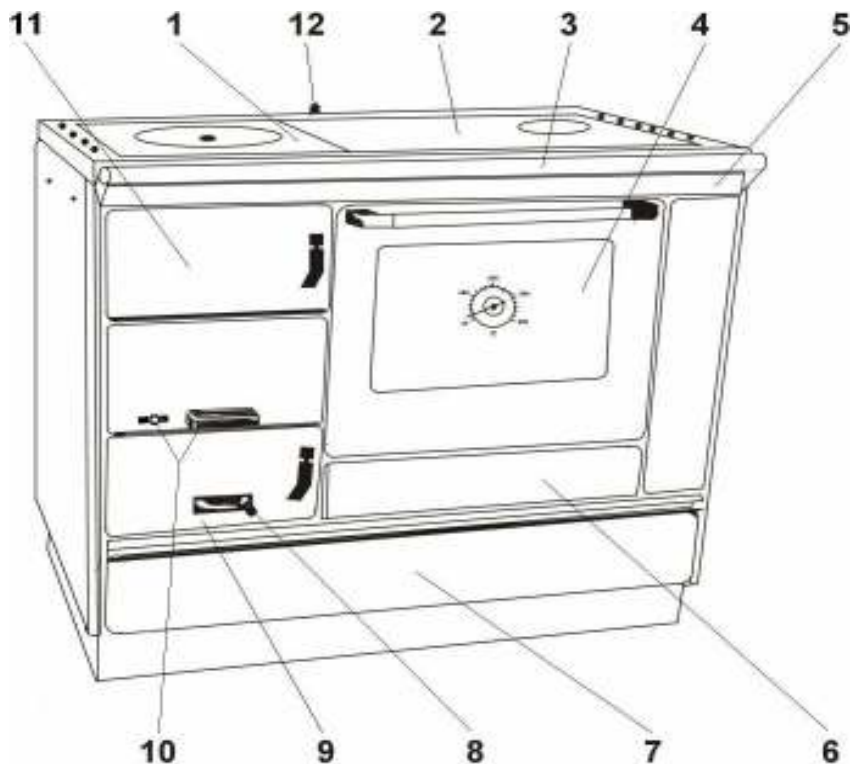
Dimensions of the Baking Oven:

Height	294 mm (11,57 inch)
Width	400 mm (15,74 inch)
Depth	482 mm (18,97 inch)

Accessories:

Roasting Pan	1 piece
Oven Grating	1 piece
Poker	1 piece

Description – TYPE 9100



Drawing 1a

- | | |
|---|---------------------------------------|
| 1. Hob Top - Plate I | 7. Solid Fuel Storage Drawer |
| 2. Hob Top - Plate II | 8. Combustion Air Intake Control |
| 3. Hand Rail | 9. Ash Door |
| 4. Oven Door | 10. Grate Handle (with safety catch)* |
| 5. Covering Plate | 11. Fire-box (burner) Door |
| 6. Ash Extracting Slot Top Covering Plate | 12. Smoke Flap Control |

*** Safety catch is supplied ONLY on certain types of Model 9100.**

Technical Specifications – TYPE 9103

The appliance - Range Cooker TYPE 9103 has been designed for solid fuel combustion in periodic feed rates and it is intended for cooking and baking in households and/or for heating the space in which it is situated, according to the ČSN EN 12815:2002 Standard as amended A1:2005. The appliance can be connected to a chimney from the back, both sides or from the top by means of a hole in the Hob-Top (Drawing 5). It is available in either left or right versions. The appliance is suitable for short operational periods, so it not possible to set the permanent-heat process with a shortest interval of fuel supply of 10 hours.

Range Cooker

Nominal Heat Output (NHO)

- Summer Regime
- Winter Regime

Efficiency at NHO

Burnt Gases Average Temperature at NHO

Burnt Gas Flow Weight at NHO

Approx. Concentration of CO at HNO (O₂ = 13%)

Minimum Chimney Draught

Flue Pipe Diameter

Distance from the floor to the centre of the flue socket

Hob Top Dimensions

Tested fuel

Average Fuel Consumption

Weight

TYPE 9103

wood	coal	
6 kW	6 kW	6 kW
6 kW	6 kW	6 kW
78,5 %		
210 °C		
8,7 g/s		
0,04 %		
12 Pa		
120 mm		
735 ±0,5 mm (28,93 inch)		
0,34 m ²		
wood (size 200 – 330 mm)		
2-3 kg/hour		
140 kg		

Dimensions of the Range Cooker:

Height (distance from floor to hob top panel)	850 mm (33,46 inch)
Width	810 mm (36,37 inch)
Depth	600 mm (23,62 inch)

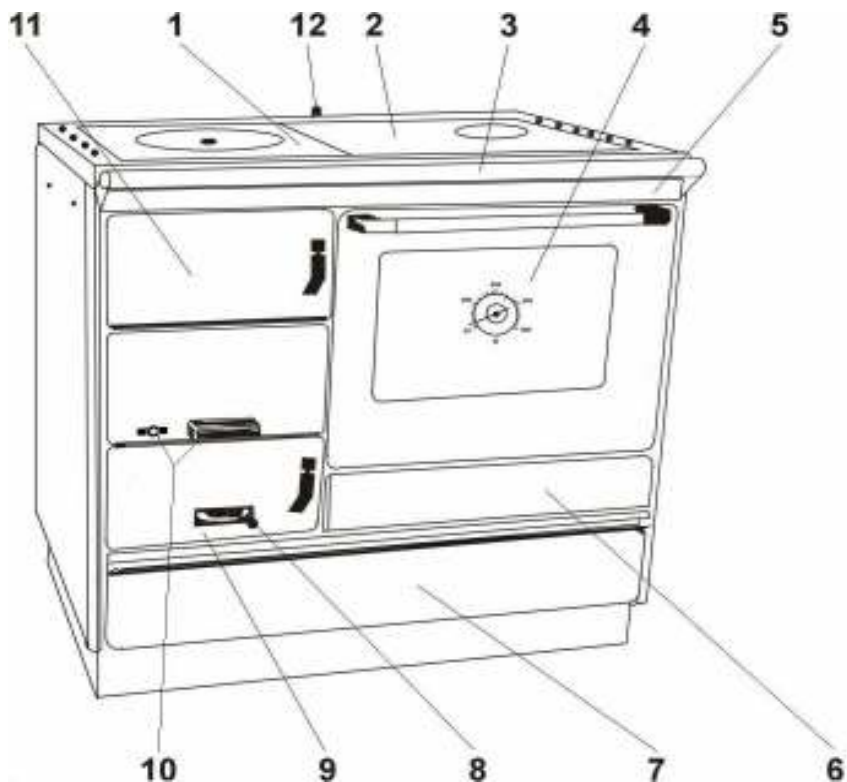
Dimensions of the Baking Oven:

Height	294 mm (11,57 inch)
Width	400 mm (15,74 inch)
Depth	482 mm (18,97 inch)

Accessories:

Roasting Pan	1 piece
Oven Grating	1 piece
Poker	1 piece

Description – TYPE 9103



Drawing 1b

- | | |
|---|---------------------------------------|
| 1. Hob Top - Plate I | 7. Solid Fuel Storage Drawer |
| 2. Hob Top - Plate II | 8. Combustion Air Intake Control |
| 3. Hand Rail | 9. Ash Door |
| 4. Oven Door | 10. Grate Handle (with safety catch)* |
| 5. Covering Plate | 11. Fire-box (burner) Door |
| 6. Ash Extracting Slot Top Covering Plate | 12. Smoke Flap Control |

*** Safety catch is supplied ONLY on certain types of Model 9103.**

Service Instructions

Fuel

This appliance is designed for combustion of solid fuel:

- recommended fuel is wood (max. diameter 200 mm, max. length 330 mm).
 - the appliance also enables burning of other kinds of solid fuel (wood briquettes, waste wood, brown coal briquettes, and brown coal blocks). However the operating conditions and parameters of the appliance may differ from those with the recommended fuel. Please note that the technical characteristics given above were based on a test wood fuel sample and using other fuel types will alter these characteristics, energy output, fuel consumption, flue draught etc.
- Make sure that the fuel is dry. It is not recommended to burn high-calorific fuels, which reduce the service life of the appliance.

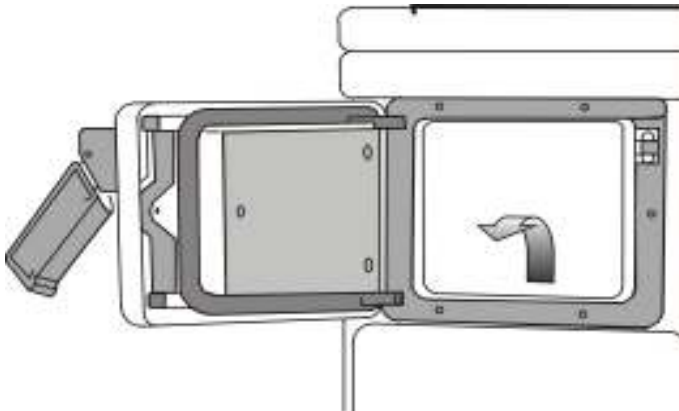
Grates

The cooker is equipped with two grates, upper (fixed) and lower (rotary). The upper grate is in position to provide optimum fuel consumption when cooking in the summer regime. For winter use we recommend that you remove this grate (Drawing 2) and take advantage of the increased volume of the fire box. Burning thus will be carried on in the lower grate, which is manipulated by the grate handle (Drawing 3).

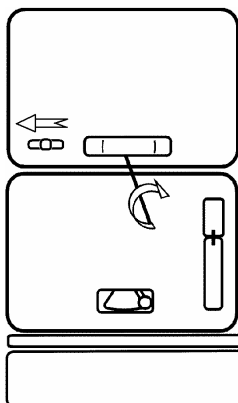
Using the Grates

Moving of grates will allow the non-burnt ashes to fall through to the ash tray. This also increases the combustion (primary) gases flow into the fire box. The grates can be agitated by moving the grate handle back and forth. Large ash pieces that, due to their shape, do not fall through the grate should be removed when the fire is out by turning the grate with the handle (Drawing 3). Sometimes grate manipulation is necessary when the upper grate is in operation, this can be done with a poker.

Note: A number of cooker variants are supplied with a safety catch on the rotating grate, which prevents the grate turning by itself. Before rotating the gate the safety catch should be pushed to the left (Drawing 3).



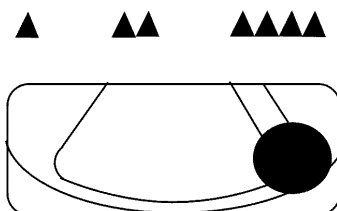
Drawing 2



Drawing 3

Air Intake Regulation (Drawing 4)

The draught regulator built into the ash door of the cooker provides controlled regulation of the air intake and control of the fuel burning speed (heat output of the cooker). The regulation is indicated by triangles. The lever positioned under the symbol ▲ means slow burning - air intake is closed) while the position under ▲▲▲▲ corresponds to fast burning - air intake is fully open (Drawing 4). While in operation the air inflow into the cooker should be uninterrupted by ensuring air intakes are clear at all times. Do not use an air suction device to compensate for poor air flow in a space where a cooker is installed.



Drawing 4

The Ash Extracting Door

When the cooker has been in operation for some time, soot will collect in the cooker parts of the draught system (especially where coal has been used). This will eventually affect the draught and may create problems while lighting the fire. It will also make operation of the cooker less economical, especially when cooking in the oven.

In the course of cleaning take off the hob top plates, then remove the soot first from the sides of the oven walls. Clean all the removed deposits through the ash extracting slot situated under the oven door (Drawing 7). This can be done simply by using damp newspaper, for example.

Appliance hob-top panel (variants)

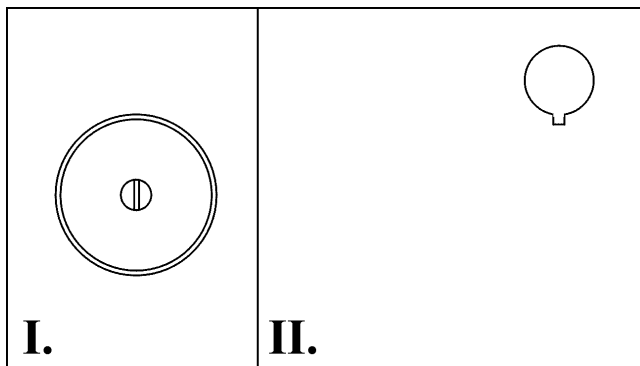
1) The standards panel consists of two parts (Drawing 5):

Plate I. - a cast iron range hob with a round removable centre plate located directly under the fire box. This plate is meant for fast cooking

Plate II. - a steel hob is located above the oven. This plate maintains a lower temperature and thus can be used for slower cooking, simmering and keeping food warm.

2) The single-piece ground steel finish hob-top panel.

You should always use pots with flat bases.



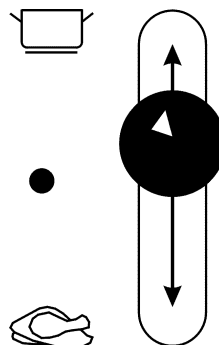
Drawing 5

Ignition Flap

The smoke flap is located under the Plate II. and is controlled by a handle at the rear of the top frame marked with two positions (Drawing 6):

Open position – Ignition and intensive cooking throughout the entire range area, Plate I. + II. (Flap open)

Closed position – Baking in the oven and cooking on the Plate I. (Flap closed)



Drawing 6

Appliance Operation

Ignition

When firing the cooker for the first time make sure that the room is well ventilated as some vapour can be produced due to burning off of the transit surface protection and oil.

Before starting a fire open the fire box doors and check if the grates are clean. Place the paper on the grate with a layer of some dry small soft wood kindling and then a layer of larger size ones. Before lighting put the smoke flap into open position (Drawing 6) and open the air intake control to let air under the grate.

Once the wood is burning close the fire door and when the fire is well-established add more wood. When the fire is in hot flame add more solid fuel. Make sure not to extinguish the fire by adding excessive amounts of fuel too quickly. Continue adding the fuel at regular intervals (about 25 min for burning on the upper grate and 45 min for burning on the lower grate).

The average fuel consumption is 2 – 3 kg of fuel per hour. Adding of fuel shall be done manually or by means of a suitable shovel. Full combustion can be visually easily checked: no heavy smoke can be seen rising from the chimney (except the time immediately after stoking up).

If you add half the amount of fuel every thirty minutes and perform grating at the same time, the combustion performance will improve.

The performance of the cooker can be regulated by letting air under the grate. Occasionally clean the grate with help of a poker. If the cooker emits smoke after the fuel is added, close the air intake. It is possible to use the whole fire box for fire. Make sure that fuel does not spill out of the fire box. If the draught or the wind conditions are poor fuel in smaller pieces as appropriate.

Cooking on the Appliance Hob Top

The range above the combustion chamber is designed for fast cooking. With the described set operation, 2 litres of water in a pot with flat bottom of a diameter of 180 cm with a lid should start boiling in 15 minutes.

During cooking watch out for boiling over. If it happens, remove as much of the spillage immediately and when finished cooking clean the remainder using a damp towel, detergent and finally using a dry towel. If the dirt bakes in, it is more difficult to remove later. From time to time (depending on the frequency of operation) wipe the range down with vegetable oil.

In the area above the oven the range has a lower temperature - this part of the range is suitable for slow cooking and for keeping food warm. Use pots with a flat bottom for best results.

Baking and Roasting

If you want to bake in the appliance, the oven has to be sufficiently heated and thermally stabilised. Use smaller dry logs for fast firing of the oven. Set the ignition flap to the "Closed" position (Drawing 6).

A typical baking temperature is reached in approx. 15 minutes. However, we recommend that you start baking after half an hour to an hour, when the appliance is warmed-through evenly and the temperature in the oven is stable and even.

For roasting of joints of meat we recommend achieving a stabilised temperature indication on the oven door thermometer between 175°C and 205°C. A typical roasting time would be 1 ½ to 2 hours.

For baking pastry and cakes we recommend the temperature indicator on the oven door is stabilised between 150°C and 175°C. The time of baking is typically from 20 to 40 minutes.

To ensure even baking/ roasting we recommend turning the tray around halfway through the cooking process.

If you want to reduce the intensity of baking (e.g. for drying of fruits), use an empty tray as a shield from below or from above.

When taking out the tray with food, you must not lay it on the cooking range hob. The temperature of the cooking range hob is much higher than that of the oven and the food could easily boil over or burn. We also do not recommend laying the tray with food on the open oven door.

The baking accessory of the appliance is designed for short-time contact with food. The short-time contact should not exceed 4 hours for drinks and 48 hours for food of solid or pasty consistence.

Cleaning and Maintenance

Fire place and flue cleaning

To preserve the appearance and reliability of the cooker, it should be cleaned regularly. The fire box should be cleaned when not in operation. If cooker is not to be used for some time, before firing it up, one should check that the flue pipes and chimney are clear. They should be checked annually by a service technician.

Clean the upper grate with a poker and a brush, the lower grate can be cleared just by agitation and dumping its content into the ash tray, using the grate handle (Drawing 3). To clean the interior walls of the cooker (draught system) and interior walls around the oven the following procedure is recommended :

- Remove the round centre plate from hob top plate I.
- Remove both hot top plates I. and II.

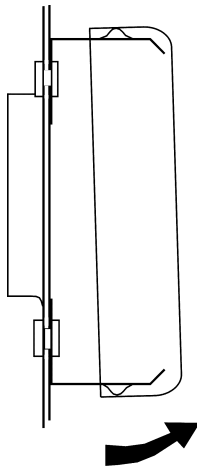
The area inside area in the cooker is now easily accessible for cleaning and brushing the ashes into the bottom. The model 9100 is equipped with a removable metal plate to assist in cleaning. The model 9103 has a sliding partition, which during the cleaning process can be moved towards the front wall of the cooker. Final removal of the ashes and soot is done by brushing through the cleaning passage into the ash extraction slot (the ash extraction door is located under the oven, Drawing 8). After cleaning, assemble the cooker back into its original state. Make sure that the all parts and fittings are tight.

Removal of the Oven Door

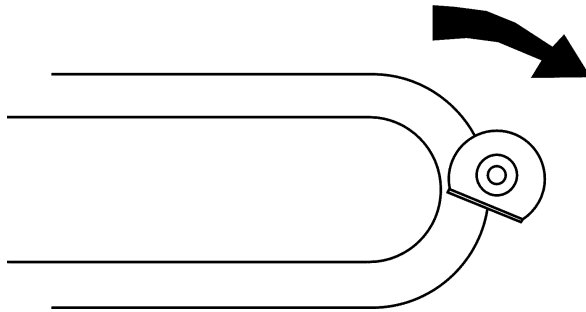
The hinge release catches are situated on the inner side of the door at the bottom on the left and right. Push the release catches towards the stove, close the door slightly and lift it off its hinges. To replace the oven door, follow the reverse of these instructions.

Removal of the ash extraction door :

- Open the storage drawer. Remove the ash extraction slot covering plate by holding it from the bottom (or from the sides if necessary) and pulling it towards yourself (Drawing 7).
- Behind the covering plate you will find the ash extraction door. This is fixed by two nuts.
- Release the ash extraction door by rotating the cut washers towards the arrow (Drawing 8).



Drawing 7



Drawing 8

Cleaning of the outer surfaces

Before cleaning the outer surfaces, allow the appliance to cool down.

- Clean the enamelled surfaces with a wet cloth or sponge and rub dry. Never use any abrasive materials as they may damage the enamel and glass. If necessary use detergents.
- Protect the surfaces from contact with the water as much as possible to prevent corrosion. Always dry clean. If you are using the cloth or sponge with detergent, the surfaces should be rubbed fully dry. We recommend covering the surfaces with a thin layer of vegetable oil from time to time, doing this before firing the cooker up for the first time.
- When cleaning the oven do not use sharp tools, wet the surfaces first, work a brush on them and wipe them with a cloth. If necessary use an appropriate detergent for removing tough dirt and scorches.

Trouble - Shooting

- It is not possible to fire up the cooker - check burnt gases passages as well as gas flue pipe and chimney for obstructions.
- The cooker is overheated - check the settings of the combustion air intake and ignition flap controls, fire box and ash extraction doors, and the position of the partition between the ash box and the oven.
- Fire in the chimney - breakdown – for example, close ignition flap control, and leave the cooker to burn off the fuel.
- never use water for extinguishing the fire.
 - close all air supplies into the cooker to extinguish the fire, if possible cover the chimney.
 - contact a chimney installer to assess the extent of any damage after the fire.
 - contact the manufacturer or your supplier.

Claims

In case of any faults that appear during the guarantee period, do not repair the cooker yourself. Make an appropriate claim by presenting a fully filled-in certificate of warranty at the shop where you purchased the appliance or at the guarantee service. Any claim will be accepted only where all terms of the guarantee have been observed.

Disposal of Packaging

Packing materials include corrugated cardboard, wrapping paper, wooden parts, PVC tapes, bags and wraps, metal tapes, edges. The purchaser has a responsibility under law to ensure that these materials are disposed of appropriately by recycling, depositing at a licenced waste facility, or by using a licenced waste carrier. Your Local Authority will advise if you are not sure of the local services available.

Disposal of the Appliance after its Service Life

The cooker contains valuable materials, which can be recycled. Disposal can be arranged by a licenced waste collector, your local authority, or by depositing at a licenced waste facility.

Note:

The manufacturer reserves the right to make minor non-functional changes to the cooker as a result of innovative and technical development of the product.

Installation Manual

Based on the design solution and the use to which the appliance will be put, this solid fuel appliance must be installed into an environment which was defined as ordinary environment (for example by standard ČSN 33 2000-3:1995 – Environment standard of the Czech Republic).

The solid fuel range cooker should be installed depending on its structural desing, building regulations, and in accordance with any other local regulations regarding this type of appliance.

Requirements for combustion air supply will be met if the appliance is installed in a room with a minimum volume of 20 m³. According to need, the appliance operation or in combination with the contemporary operation of other heat equipment in the room, additional ventilation may be necessary. In cases where dangerous situations may arise, such as the temporary formation of combustible gases and works which may cause a fire to start (potentially explosive), the appliance should be put out of service (by closing the combustion chamber door the fuel will be allowed to burn out on the grate). If combustion, venting and heating air control louvers are used, it is necessary to place them is such a way that clogging cannot occur.

Appliance connection to the Chimney

A flue (exhaust) branch is installed to an outlet on the appliance (rear, sides, and top – through the hob-top). The installation is carried out in such a way that a ring is applied to the internal side of the appliance, which connects with the external flue branch, and they are mutually screwed together moving in the opposite direction.

In case you use a side outlet, it is first necessary to unscrew the side part, from which we dismantle the top cover of the hole, apply the blanking cap to close the rear outlet, replace the side part and screw it closed.

With the use of the top outlet (through the hob-top) it is necessary to remove the blanking cap and to attach the flue branch – without the ring, and use the delivered blank cover to close the rear outlet.

A chimney with a sufficient draught is absolutely essential for correct appliance operation. **We recommend the chimney with hight of 5 meters and diameter of 160 mm.** Try to connect the appliance using the shortest route. Flue gas ducting made of sheet-metal tubes consists of several sections and longer than 2,000 mm shall be firmly anchored. The entire set shall be mutually, firmly and tightly connected in the draught direction (individual overlaps must be a minimum of 80 mm). An existing chimney flue shall be provided with an approved liner flue that corresponds to the exhaust flue diameter.

Connection of the appliance to the chimney should comply with the individual national regulations at place of installation and use (for example ČSN 73 4201:2008 Standard of the Czech Republic). The chimney shall be issued with a certificate (revision report) given by a respective authority (chimney sweeping agency). The appliance should be installed in such a way that adequate access can be provided for cleaning of the flue ducting and the chimney. In assembly, it is necessary to observe the principles of fire safety (for example according to the ČSN 06 1008:1998 Standard of the Czech Republic). The cooker can be connected to a shared chimney (Fig. 10). Chimneys and flue ducting to which solid fuel are connected shall be swept 6 times a year (for example according to the Department of the Interior Czech Decree No. 111/82 Coll.). Routine operation, especially due to damp fuel, soot and tar creates deposits in the chimney. If regular inspection and chimney cleaning are omitted, the probability of a fire in the chimney increases.

Safety Instructions

The minimum safe distance from flammable matters with a combustibility grade of B, C₁, C₂ is a minimum 750 mm forward of the appliance and 200 mm to the sides and. For flammable matters with C₃ combustibility grade and/ or with an unproven combustibility grade, the distance should be doubled. No flammable objects should be laid on the appliance and should be kept at a safe distance from it. When the appliance is situated on a floor made of a flammable material, it should be set on a fireproof, thermo-insulating plate overlapping its section plan:

- not less than 600 mm at the front (before the stoke hole).
- not less than 300 mm from the lateral side of the stoke hole.

A protective baffle plate is used in cases where, due to space reasons, the prescribed safe distance cannot be kept. The protective baffle plate shall have a constant position between the appliance and the protected material in a distance of 30 ±5 mm from the protected material. The protective baffle plate shall overlap the protected material up to the nearest wall (ceiling) made of a fireproof material, however not less than 300 mm at the upper side and 150 mm at the lateral sides. **We recommend that your installer check this reduced dimension with your local building control department.**

Description of materials type for flammable classification in cookers manuals (in accordance with Czech and EU standard No.73 0823):

Flammable level	Rating	Materials
A.	Non-flammable	asbestos, brick, ceramic wall tile, chamotte, plaster mixture (without organic enclosure).
B.	Uneasy-flammable	building wall panels (for example a gypsum wallboard), VELOX, IGNOS, touchstone felt panels, fibreglass panels).
C ₁ .	Flammable with difficulty	beech wood, HORBEX board, wood multi-layer board, WERZALIT, Formica, felt boards.
C ₂ .	Moderately flammable	pine tree wood, larch wood, spruce wood, wood chip boards.
C ₃ .	Easily flammable	sarking felt, cellulose boards, tar panels, wood-pulp fibre, phellem, polyurethane, polystyrene, polypropylene, polyethylene.

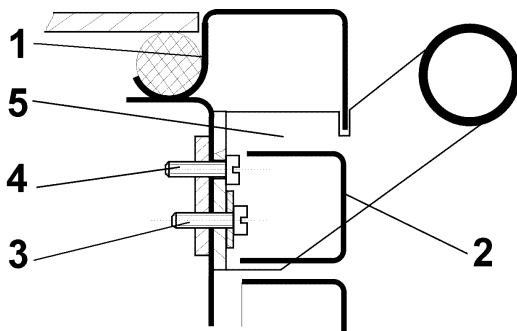
Warning for places where burns can occur:

- hob-top, hob frame
- combustion chamber door, oven door
- oven inner walls

Mounting of the Hand Rail (Drawing 9)

The front hand rail is supplied with your cooker. It can be found on the back of the wooden pallet behind the cooker. It should be mounted in the following way :

- 1) Remove the covering plate by pulling it towards yourself (Position 2)
- 2) Remove the screws (Position 3)
- 3) Loosen the screws (Position 4)
- 4) Mount the hand rail on the brackets by lining up the holes and any recesses or slots
- 5) Fasten screws (Position 4)
- 6) Fasten the remaining two screws (Position 3)
- 7) Check if the hand rail is tightly fixed, tighten the screws if necessary
- 8) Push the covering plate back into the place (Position 2)



Drawing 9

Important notice

1. Production standards

KVS MORAVIA solid fuel appliances are produced in accordance ČSN EN12815:2002 Standard with amended A1:2005, which is valid for the Czech Republic and European Union.

2. Installation and operation standards

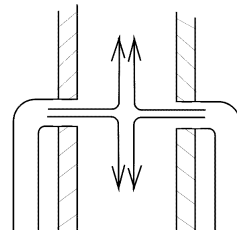
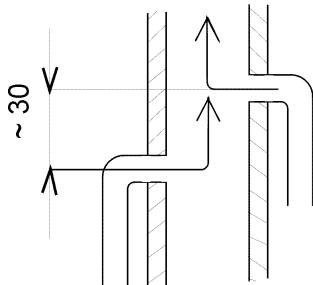
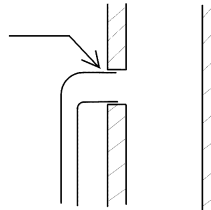
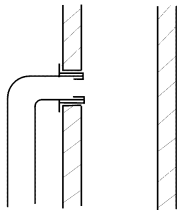
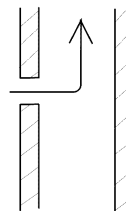
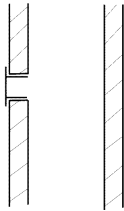
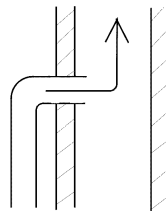
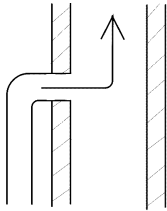
All the above installation and operation instructions for the appliances primarily comply with the Czech regulations, and may not comply fully to individual national regulations at place of installation and use!

The buyer should consult their installer or specialised officials on all of the local installation and operation regulations for this appliance or similar appliances!

Flue gas ducting connection to the Chimney
(valid for Czech Republic)

properly

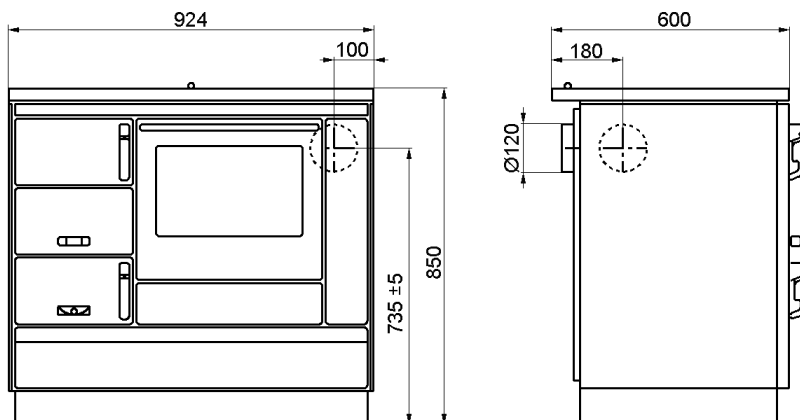
improperly



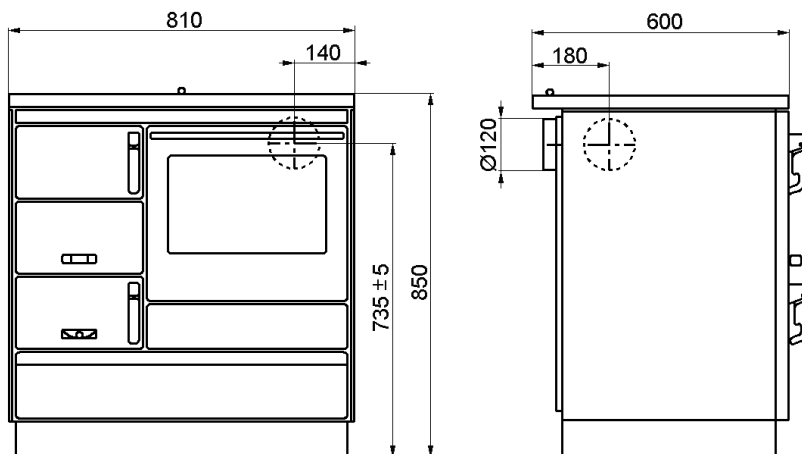
Drawing 10

Dimensional sketch of the Appliance

Type 9100



Type 9103



(All of dimensions are in mm)

Producer:



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