DEUTSCH

INHALTSVERZEICHNIS

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The use of economic and ecologic combustibles, the sweet warm of natural fire, the sweet fragrance of the wood of our forests are the qualities that make indispensable wood fired thermal cookers in every house.
Your choice fell upon a Rizzoli thermal cooker, result of a tradition started in 1912 when Carlo Rizzoli began the production of wood fired thermal cookers with the typical style of the valley in the dolomites. Year after year Rizzoli continued to refine its thermal cookers using even more advanced technologies, but without losing contact with the elegance, the beauty and the functionality of the original product.

1 INSTRUCTIONS

1.1 GENERAL INSTRUCTIONS

For the perfect working of Rizzoli thermal thermal cookers it is necessary the correct placing and connection to the chimney, to AC power and
to the heating system. The installation normally ends when you light the thermal thermal cooker. It is necessary to predispose a duly made chimney and well suited to the model you chose. Before the connection of the thermal thermal cooker it is necessary to contact a local chimney sweeper. The installation usually ends with the lighting of the thermal thermal cooker and the verify of the correct working. It is necessary to use well dried and good quality wood: it is also necessary to sweep the chimney and the thermal thermal cooker regularly. We recommend to read carefully the instructions in this booklet before starting to use the thermal thermal cooker. Keep this booklet because it could be useful in case of necessity.
Talking about the working and the installation of Rizzoli thermal thermal cookers, all the European laws, national and local laws and rules must be respected.

1.2 SAFETY INSTRUCTIONS

- Respect all the safety distances during the installation of the cooker.
- The extracting fans, if working in the same room in which the device is installed, might create problems in case of not proper aeration.
- The grids and the ventilation holes of the device must not be obstructed during the installation or the use of the device.
- The installation must guarantee the possibility of access to clean the device, the flue outlet, the chimney hood and for the maintenance of the hydraulic components.
- When using the cooker, some parts of the device may be very hot, keep attention not to lean and not to touch by hand hot parts (frame, plate and doors).
- When you cook and generally when you use the cooker you must not wear inflammable dresses.
- Keep more attention in presence of children.
- Do not lean to the cooker inflammable or explosive materials, in particular curtains or very close to it, inflammable flacons and aerosol bombs.
- The fire door must always be closed except for lighting operations, fire feeding operations and during the maintenance operations.
- Check regularly the fume-circuit and, the chimney connection and the chimney itself. At least every six months of normal use contact an experienced technician for checking and cleaning the wood fired thermal cooker.
- The plate must be cleaned regularly according to necessities after every use and make regularly the specific maintenance.
- Before you go away for a long time, be sure that the fire is terminated.
- The first lightings of the cooker and the first seasonal lightings must be done with temperate fire in order to prevent possible breakings of the internal parts.
- After a long period in which you do not use the cooker, check carefully that obstructions are not present and that the cooker works regularly.
- Use only original or authorized spare parts.
- Do not make any unauthorized modification.

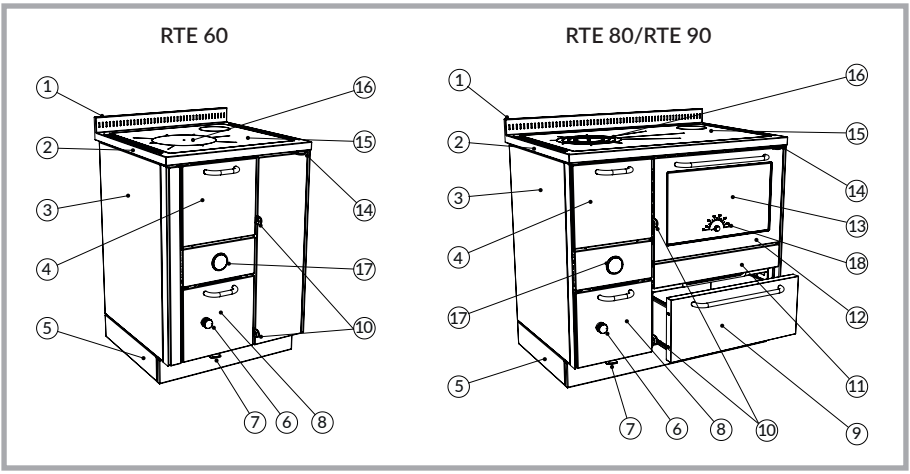
1.3 RECOMMENDED COMBUSTIBLES

Wood fired cookers are built to use wood for burning. We recommend to use good quality wood, dry, seasoned and possibly broken.
Using good quality wood is warranty of good heating power and avoid the forming of carbon residuals and soot.
To avoid dissipation of energy and eventual deforming and damaging processes you must not use excessive combustible: see the technical data in chapter 7.

1.4 OTHER COMBUSTIBLES

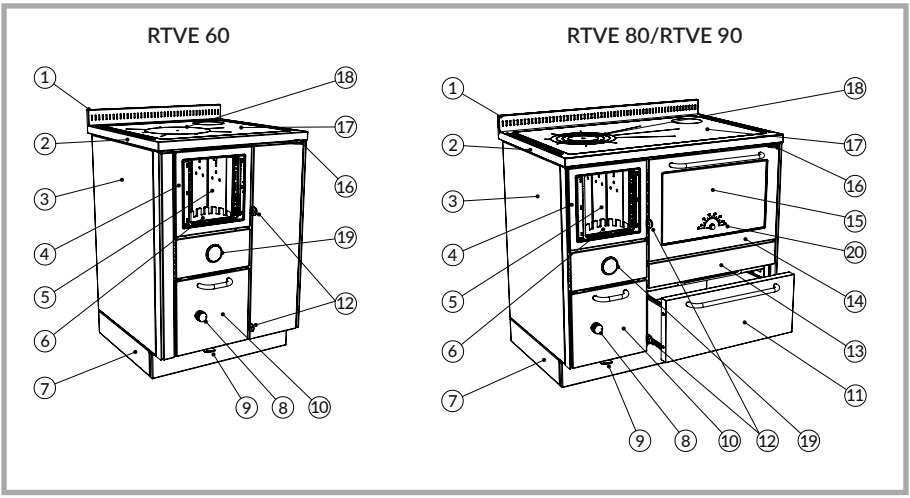
The use of pre-compressed trunks and coal is allowed only desultorily and with moderation, because the strong heating produced may damage the internal refractors, the wood-carrying grill, the oven and in general all the parts directly exposed to fire. Other combustibles and refuses, for example plastic, enamelled or treated wood or carton must not be burned. Using this materials cause serious damage not only to your health and environment but also to wood fired cooker and chimney. The cooker must not be used as incinerator. It is recommended to use only the suggested combustibles and not liquid combustibles.

1.5 PARTS OF THE THERMAL COOKER



Picture 1

1 Riser
2 Frame
3 Side
4 Fire door
5 Plinth
6 Primary air regulator
7 Air intake lever
8 Ash door
9 Woodbox
10 Door opening lever
11 Dashboard
12 Oven door
13 Oven door glass
14 Starting lever
15 Plate
16 Disc or circles
17 Boiler thermometer
18 Oven thermometer



Picture 2

1 Riser
2 Frame
3 Side
4 Fire door
5 Fire door glass
6 Flame keeper
7 Plinth
8 Primary air regulator
9 Air intake lever
10 Ash door
11 Woodbox
12 Door opening lever
13 Dashboard
14 Oven door
15 Oven door glass
16 Starting lever
17 Plate
18 Disc or circles
19 Boiler thermometer
20 Oven thermometer

1.6 ACCESSORIES

Together with the wood fired thermal cookers you will find some accessories that simplify the installation, the maintenance and the daily use of the device.

- Ash drawer
- Glove (RTVE range)
- Poker
- Scraper (for thermal cookers with oven)
- Adjustable crank for grill raiser
- Oil for the care of the plate
- Cleaning oil for the plate
- Abrasive sponge
- Devices for the connection to the chimney, variable depending on the model of thermal cooker
- Grill for the oven (for thermal cookers with oven)
- Baking-pan (for thermal cookers with oven)
- Baking-pan holder (for thermal cookers with oven)
- Glove box
- Instruction and maintenance booklet
- Green booklet and warranty certificate of the wood fired thermal cooker

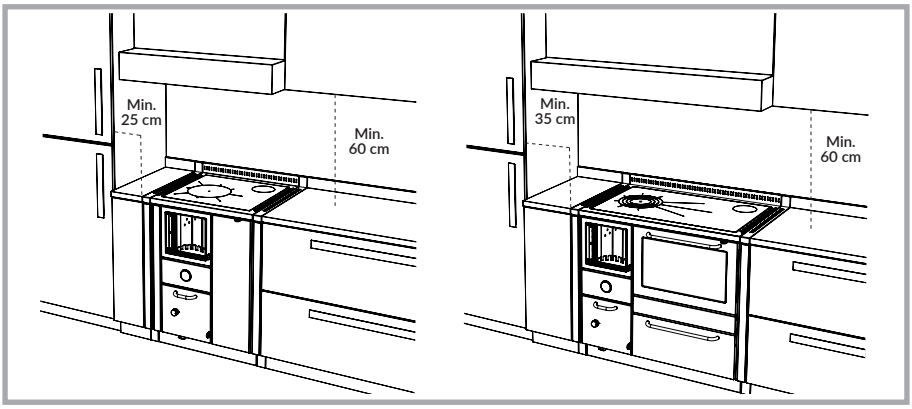
2 INSTALLATION

2.1 GENERAL NOTES

Wood fired thermal cookers are easy to install; anyway you must take some cares to avoid damages due to unskillfulness. Before the installation, we recommend to verify the necessary space, the safety distances, the correct predisposition of the chimney and the possibility to make the necessary connections. Do not drag the thermal cooker, move it keeping it lifted from the floor. The thermal cooker must not be moved making effort on the handrail or on the handles.

2.2 SAFETY DISTANCES

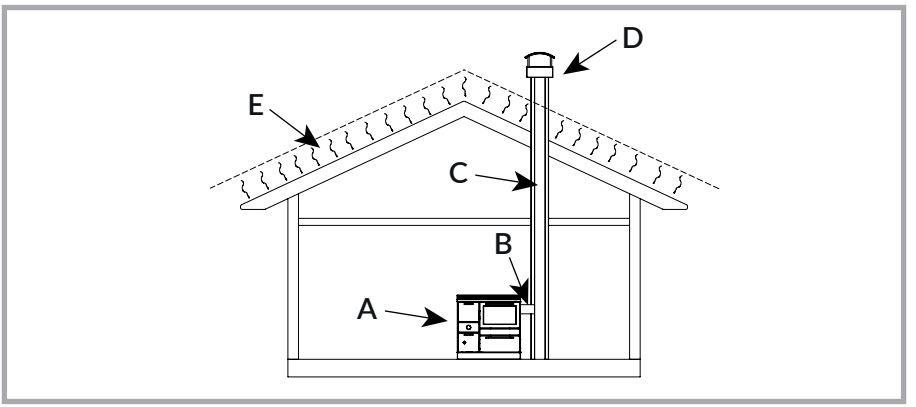
Be sure that the thermal cookers that have to be framed has the minimum safety distances to inflammable or high temperatures sensible materials (see paragraph 7.4). Rizzoli produces also spacers to make the installation into furniture easier. If the cooker is framed between not sensible to heating materials, it is necessary anyway to keep a minimum distance of 1-2 mm to allow the dilatation of the materials when
the temperature changes. The device must be placed on a roof with enough load capacity. If the existing building does not satisfy this condition, you must adopt different solutions (for example you can use a plate to distribute the load). In case of floor made with inflammable material, it is necessary to use a fireproof protection for the floor in front of the fire door. The cover of the floor must extend for 50 cm minimum in the front part and 30 cm minimum over the fire door on the sides. We suggest not to install furniture on the thermal cooker. Eventually, the resistance of the furniture to heat must be guaranteed, in this case you must respect a minimum distance of 60 cm from the plate. In case you want to use an aspiring hood, it is absolutely necessary that it is resistant to high temperatures. Rizzoli is specialized in the production of aspiring hoods to be used together with the wood fired thermal cookers. During the installation, you must be sure not to obstruct the ventilation holes on the top and in the plinth: this to prevent the decadence of the isolating properties of the thermal cookers and, in general, of its correct working.



Picture 3 - Minimum safety distances when using suited spacers for the installation into furniture.

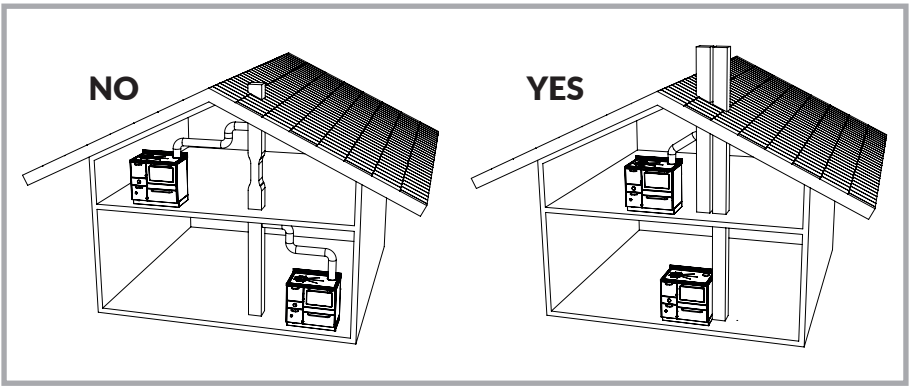
2.3 CHIMNEY

Chimney has a main importance for the correct working of a wood fired thermal cooker. Wood fired thermal cookers are built to insure the maximum efficiency, anyway the performances of the thermal cooker are deeply influenced by the chimney. If the chimney has defects or does not match the building laws, it is not insured the correct working of the thermal cooker. To build the chimney you must use suitable materials, made to work with high temperatures and according to fireproof laws: it is not important the kind of material, on condition that it is right and that the chimney is isolated.



Picture 4 – Components of the chimney. A= Cooker B= Conjunction or fume conduct C= Chimney hood D= Chimney pot E= Reflow zone

2.4 DIMENSIONS AND CORRECT FORMS OF CHIMNEY



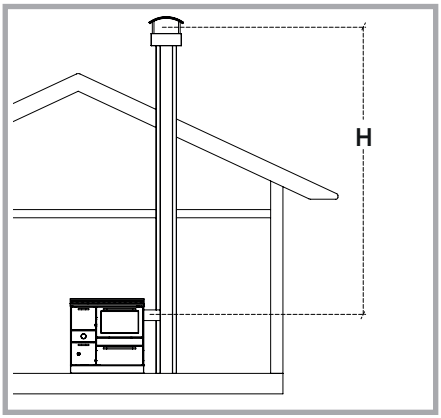
Picture 5 - Samples of correct and incorrect chimney connection.

Chimney must be dimensioned in a correct way according to the type of thermal cooker it is connected with, minding the environmental and general conditions of the place in which it is placed. The section of the chimney must permit the flow of the fumes produced by the
thermal cooker without difficulties, but it must not be too big otherwise the chimney will experience

problems in heating itself and this may generate problems like weak draught and condensation. In table 1 it is indicated the recommended diameter for the flue according to the model and to the height of the chimney (H). The height of the chimney must be enough to insure the draught necessary to the chosen model. Bigger is the height of the chimney, bigger is the draught; if the chimney is lower than 4 metres, the correct working of the thermal cooker is not insured. The chimney must not have tortuous parts, horizontal parts or counterslope parts; the number of bends must be reduced to minimum. In picture 5 you can see some examples of good and bad chimney connection.

Model	RTE 60 RTVE 60	RTE 80 - RTVE 80 RTE 90 - RTVE 90
ø entrance	130 mm	140 mm
ø flue H < 4m	Draught not guaranteed	Draught not guaranteed
ø flue 4m < H < 6m	160 mm	180 mm
ø flue H < 6m	150 mm	160 mm
Necessary depression	11 Pa	12 Pa

Table 1 - Indications for the dimension of the chimney according to its height.



Picture 6 - H dimension for the sizing of the flue.

2.5 FLUE

The flue must be well isolated and circular if possible. The flue must not have defects, narrowings or losses. All the inspection doors must be closed and well sealed. The connection of other devices to the same chimney is not allowed.

2.6 CHIMNEY POT

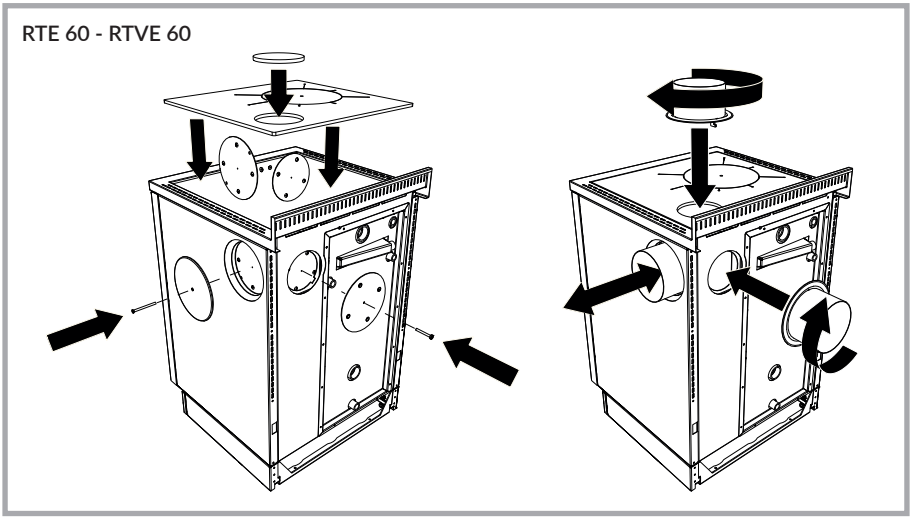
The chimney pot must have an exit section doubled than the one of the chimney, in order to make easier the exit of the smoke. The chimney pot must be enough tall to lean out over the reflow zone generated by the roof: if you are not sure about this contact experienced technicians. If you are in a windy place, it might be necessary to install windproof devices.

2.7 CONJUNCTION

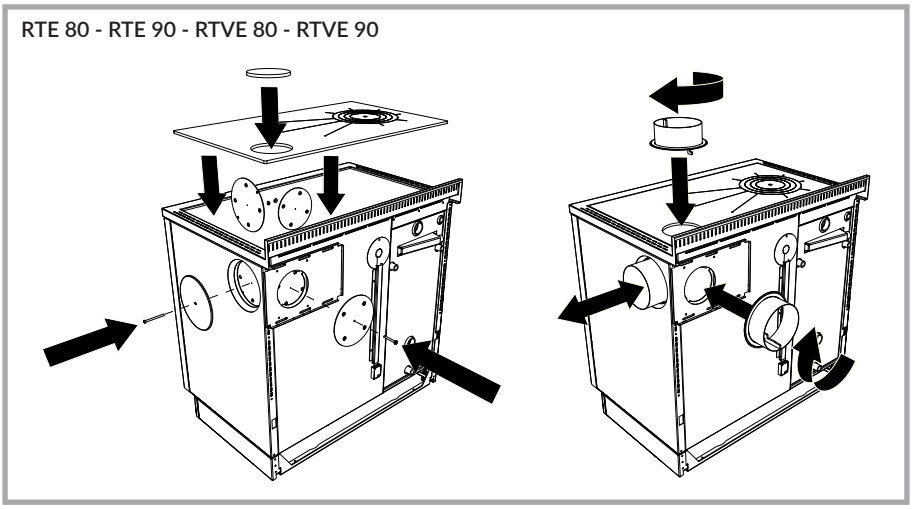
The conjunction of the thermal cooker to the flue must be as short as possible and must not have horizontal or not much inclined parts. The counter-slope parts are forbidden and must be absolutely avoided. Near the conjunction, inflammable materials must not be present. The conjunction must not go inside the flue. To increase the safety of the conjunction, we suggest to install a washer on the wall being sure that the connection between the washer and the chimney is walled and well sealed. Also the connection between the thermal cooker and the conjunction must be fixed and sealed.

2.8 FLUE OUTLET PREDISPOSITION

Wood fired thermal cookers are predisposed to have flue outlets in different positions (up, back, sides). Before connecting the thermal cooker to the chimney you must be sure that all the outlets you will not use are well closed. Eventually, you can make modifications using the devices given together with the thermal cooker.



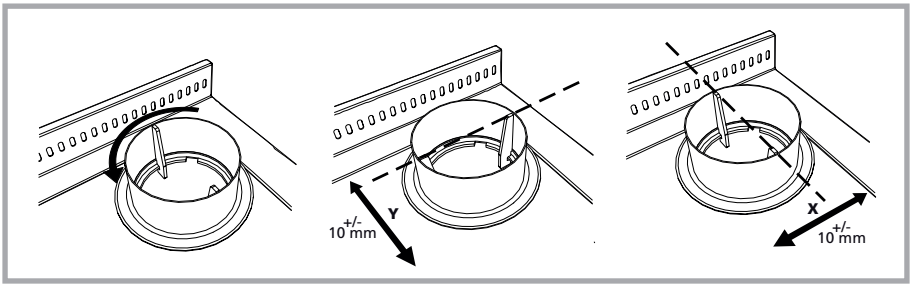
Picture 7 – Multiflue thermal cooker without oven, predisposition of the correct flue outlet. In the example, thermal cooker with right flue outlet. The left flue outlet is symmetrical.



Picture 8 – Multiflue thermal cooker with oven, predisposition of the correct flue outlet. In the example, thermal cooker with right flue outlet. The left flue outlet is symmetrical.

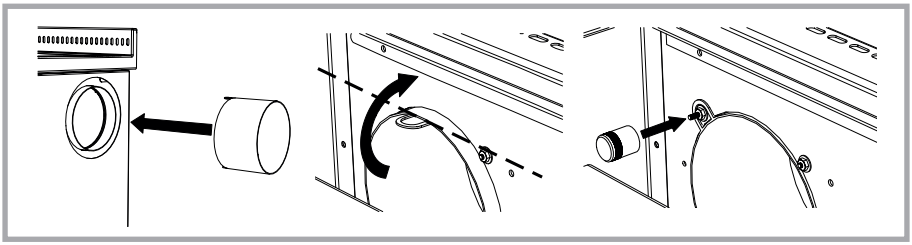
2.9 CORRECT CONJUNCTION TO THE CHIMNEY

If the conduct of the chimney starts from a lower floor than the connection point of the thermal cooker, it may be necessary to close the conduct under the connection pipe with fireproof materials. If you have the chimney behind or up, you have to use the connector with bayonet coupling. This must be inserted and turned so that it can remain blocked. This connector has a tolerance of about 1 cm to make the installation easier. The tolerance is available according to a single direction which depends on the orientation of the connector (see picture 9).



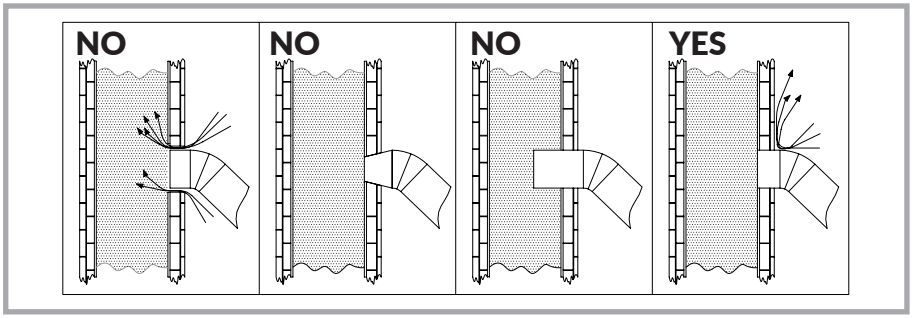
Picture 9 - Tolerance for flue outlet on the top and back. The tolerance depends on the orientation of the connector.

If you have a lateral chimney in correspondence of a side, the connector is sliding. To install it correctly, it is necessary to remove the cooking plate. Now, the connector must be completely inserted inside the wood fired thermal cooker or the chimney, keeping the fixing buttonhole on the same side of the thermal cooker. Then, you can place the wood fired thermal cooker, extract correctly the connector so that it connect the thermal cooker with the chimney. Finally, bend the buttonhole and block the parts with the screw-lock (see picture 10).



Picture 10 - Flue outlet on the side. Fixed connector for the flue outlet on the side.

The connection with the chimney must be always well fixed and sealed, it must not have narrowing and must not decrease the usable section of the chimney (see picture 11). If near the thermal cooker there is inflammable material or high temperatures sensible, the connection must be isolated and the safety distances must be strictly observed.



Picture 11 - Samples of correct and incorrect connection to the chimney hood.

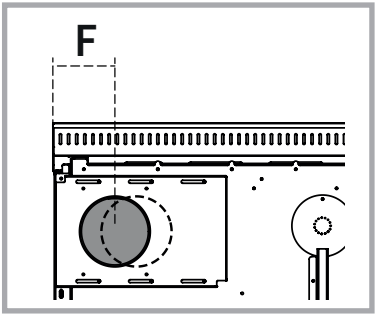
2.10 ADJUSTABLE REAR FLUE OUTLET (THERMAL COOKERS WITH OVEN)

On most models with oven it is possible to change the position of the rear flue outlet. The movement can be done both horizontally and vertically, in order to connect more easily the pipe to the chimney hood. For the horizontal regulation, it is necessary to unscrew the screws sustaining the external sheet and then screw again them when the flue outlet is in the chosen position. On some models, it is possible to obtain further regulations removing and tilting the sheet (see picture 12b). On demand, Rizzoli can provide an extra sheet to be used in the intermediate positions of the sheet. For both the horizontal and the vertical regulations there is a tolerance of 1 cm thanks to the provided bayonet fitting as described in paragraph 2.9.
In the following tables are reported, for each model with oven, the minimum and maximum dimensions (in mm) of the distances from the centre of the hole of the rear flue outlet from the external side of the frame.

STANDARD SHEET

Model	F min	F standard	F max
RTE 80 - RTVE 80	115	135	155
RTE 90 - RTVE 90	115	135	155

Table 2a – Minimum and maximum distances from the centre of the hole of the flue outlet. It is not considered the tolerance generated by the bayonet fitting.

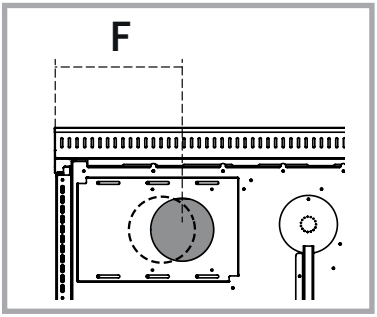


Picture 12a – Rear sight of the cooker and representation of the minimum and maximum movement of the rear flue outlet position with standard sheet.

TILTED STANDARD SHEET

Model	F min	F standard	F max
RTE 80 - RTVE 80	210	230	250
RTE 90 - RTVE 90	210	230	250

Table 2b – Minimum and maximum distance from the centre of the hole with the extra sheet. It is not considered the tolerance generated by the bayonet fitting.



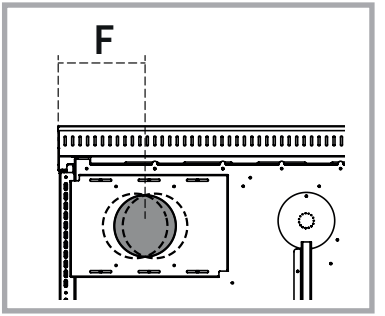
Picture 12b – Rear sight of the cooker and representation of the minimum and maximum movement of the rear flue outlet position with tilted standard sheet.

EXTRA SHEET (OPTIONAL)

Model	F min	F max
RTE 80 - RTVE 80	155	210
RTE 90 - RTVE 90	155	210

Table 2c – Minimum and maximum distance from the centre of the hole with the extra sheet. It is not considered the tolerance generated by the bayonet fitting.

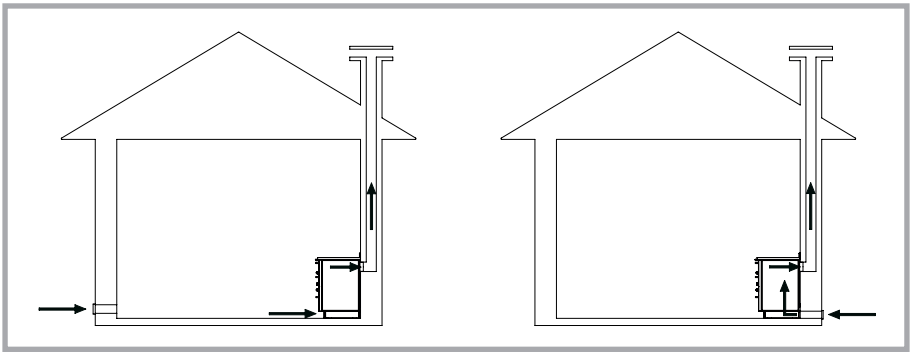
Eventually, it could be necessary to turn the extra sheet on the right side to obtain the chosen position.



Picture 12c – Rear sight of the cooker and representation of the minimum and maximum movement of the rear flue outlet position with extra sheet.

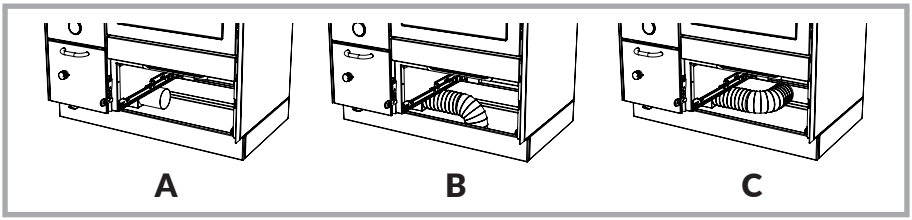
2.11 AIR INTAKE

The standard installation of the wood fired thermal cooker considers that the comburent air is taken from the room where the cooker is installed through the air intake of the cooker located in the plinth. In this case, in the room must be always ensured the recycle of fresh air, in particular if the room is small and window and door frames are hermetic. The correct flow of air in the room must be ensured also in presence of other combustion based devices, aspiring hoods, chimneys and ventholes. The air intake in the room must have a minimum surface of 80 cm2.
On demand, Rizzoli can give specific valves which can allow the automatic opening of the air intake only when it is necessary for the correct working of the wood fired cooker, in order to warrant a maximum depression of 4 Pa in the place of installation. The wood fired thermal cookers can also be connected so that the comburent air comes directly from outside. In this way, for the wood fired thermal cooker it is not necessary another air intake in the room of installation. To make this it is necessary to prepare a conduct connected directly with the external part of the house and make a direct connection with the air intake of the thermal cooker. The air intake of the thermal cooker is



Picture 13 - Installation with air intake in the room of installation and installation with air intake directly connected to the wood fired thermal cooker.

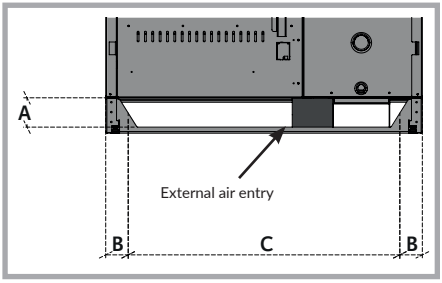
located inside the plinth. In the models with oven, it is possible to access directly from the woodbox. For the connection, we suggest to use a flexible pipe.



Picture 14 - Possible connections of the air intake of the cooker. A= External air intake not connected, B= External air intake on the floor, C=External air intake on the wall.

To make the connection easier we suggest to make the external air intake on the floor in correspondence with the internal part of the plinth, or on the wall through the rear part of the thermal cooker according to specifies depending on the model (see table 3 and picture 15). Are also possible other solutions for the connection but they must be decided together with Rizzoli.

WARNING! Aspiring hoods or extracting air fans in the room may generate problems to the device if there is not a suited air intake or in case of air intake sub-dimensioned.



Picture 15 - Rear sight of the plinth of the wood fired cooker and specifies for the connection with the air intake.

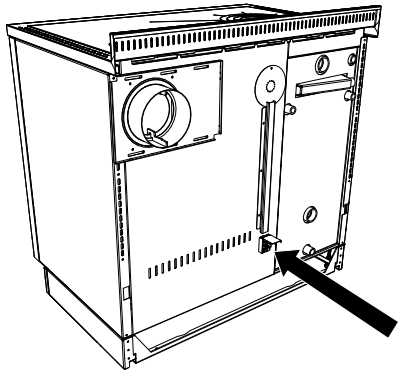
Model	A	B	C	ø
RTE 60 - RTVE 60	83	64	467	95
RTE 80 - RTVE 80	83	64	667	95
RTE 90 - RTVE 90	83	64	767	95

Table 3 - Dimensions for the connection of the external air intake.

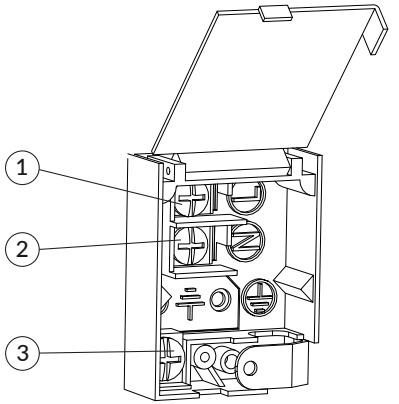
Dimensions in mm

2.12 ELECTRIC CONNECTIONS

The electric connection of the thermal cookers gives power only to the oven lamp. The connection to AC power must be done by experienced people and according with existing laws. The installer is responsible of the correct connection according with safety rules. To make the connection, you have to connect an electric cable to the terminal board placed in the rear side of the thermal cooker. Must be done the correct connections of line, neutral and earth as described in picture 17. The cable and every other electric device added must be dimensioned for the electric load to sustain and must not be in contact with points 50° C hotter than ambient temperature.



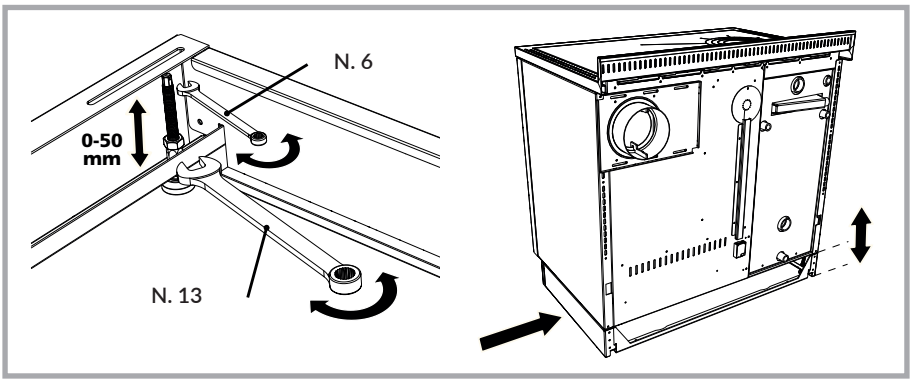
Picture 16 - Position of the terminal board for the connection to the network.



Picture 17 - Terminal board for the connection to the network: 1. Line 2. Neutral 3. Earth.

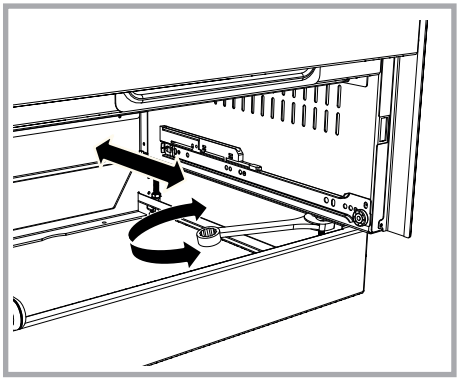
2.13 PLINTH REGULATION

The plinth of the thermal cookers can be regulated in order to match the space in which the cooker is inserted. To regulate the pins of the thermal cooker it is recommended to remove the woodbox and to place the device laying on the rear side to have access on the lower part. For this operation it is suggested to protect the floor with adequate materials. It is possible to adjust the level of the cooker by operating on the levelling pins that can be regulated in height and the recess of the plinth to the front. To do this, it is necessary to regulate singularly each pin placed in the plinth near the corners, so that the adjustment of the cooker is correct. For the regulation of the pins, use an hex key n.6: once you have reached the desired height, fix the locknut with a n.13 key (see picture 18). The pins have an excursion of 50 mm.



Picture 18 – Regulation of the height of the cooker with hex key through the levelling pins.

To regulate the plinth recess to the front release the bolts that keep fixed the plinth to the cooker: the bolts are screwed vertically from the bottom to the top. Then scroll the plinth in the chosen position and close the bolts. For this operation it is necessary an hex key (see picture 19). It is necessary to pay attention to not remove completely the bolts, release them only for what it is necessary.



Picture 19 – Regulation of the plinth recess to the body of the cooker.

2.14 FIRST LIGHTING

Before starting to use the thermal cooker, remove the packaging materials in the oven and in the wood box, remove the stickers and remove the plastic film in which is wrapped the plate and remove with a rag the most of the oil on its surface. Before lighting the thermal cooker, it must be connected to a working heating system and water must be present in the boiler. We suggest to make a first lighting of the thermal cooker just to verify the correct installation. The first lighting must be done with moderate fire, using little wood broken in small pieces. In the next lightings you can progressively increase the load of combustible.

2.15 SETTLEMENTS

The refractory mortar used for the internal walling contains always a little moisture that is eliminated after the first periods of use: so it is normal that the first times you light the thermal cooker a little condensation is being generated. All the refractory materials inside the thermal cooker experience a settlement process that may generate small holes on the bricks, such holes do not preclude anyway the working of the thermal cooker. Other settlements may involve other parts of the thermal cooker so during the heating and cooling phases you might hear light noises. These symptoms do not absolutely preclude the use of the thermal cooker and fading out till disappearance with the constant use of the thermal cooker.

3 HEATING SYSTEM

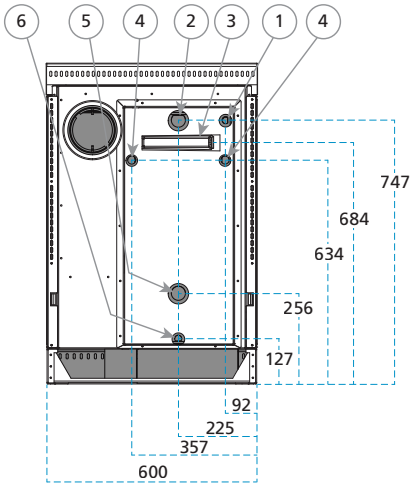
3.1 GENERAL NOTES

RTE and RTVE thermal cookers are endowed with boiler to use the heating produced by the device through a system with fluid vector for heating and for the production of hot water. The system must be designed according to UNI 10412-2:2006 law by a qualified thermal technician and must be installed by experienced people according to existing laws in particular to UNI 10683:2005 law. The thermal cookers are endowed with all the necessary predispositions for a correct installation, every external component (as pumps, valves, acoustic alarms, pressure switches) must be obtained by third parts according to the specifies of designer and installer.

3.2 CONNECTIONS TO THE HEATING SYSTEM

RTE 60 - RTVE 60
with flue outlet on the right side

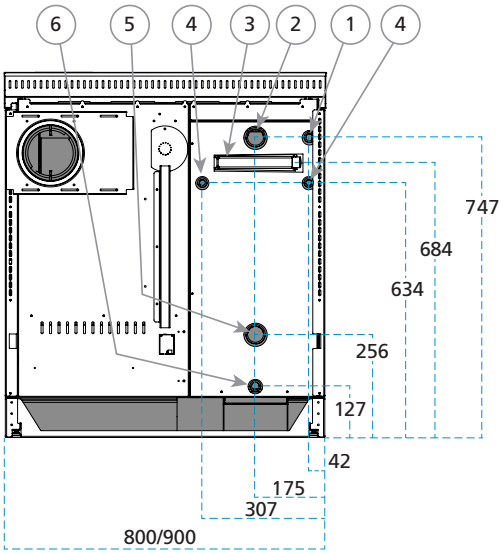
1) Connection detector of auxiliary thermostat (optional) ø ½" female
2) Going connection ø 1"¼ female
3) Bulb for thermal discharge detector (optional) ø ½" female
4) Connection for thermal discharge circuit (optional) ø ½" male
5) Return connection ø 1"¼ female
6) Connection discharge ø ½ female



Picture 19 - Hydraulic connection scheme of a thermal cooker RTE 60 and RTVE 60 with flue outlet on the right side (rear sight). The thermal cooker with flue outlet on the left side is symmetrical.

RTE 80-90 - RTVE 80-90
with flue outlet on the right side

1) Connection detector of auxiliary thermostat (optional) ø ½" female
2) Going connection ø 1"¼ female
3) Bulb for thermal discharge detector (optional) ø ½" female
4) Connection for thermal discharge circuit (optional) ø ½" male
5) Return connection ø 1"¼ female
6) Connection discharge ø ½ female



Picture 21 - Hydraulic connection scheme of a thermal cooker RTE 80, RTE 90, RTVE 80 and RTVE 90 with flue outlet on the right side (rear sight). The thermal cooker with flue outlet on the left side is symmetrical.

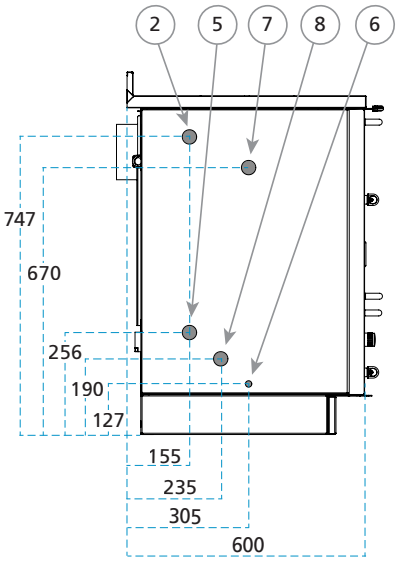
Before the lighting of the thermal cooker it is necessary to make the connections to the heating system. The use of the thermal cooker with empty or not connected to the system boiler causes the irreversible damaging of the boiler itself.
Anyway, it is necessary to connect the going connector, the return connector and the discharge connector (necessary to empty the boiler in case of maintenance), the other connectors according to the kind of system that you make could be not necessary and so in this case you can cover them.
In the rear part of RTE - RTVE thermal cookers there is an useful space of 35 mm between the fittings and the wall of the room. Normally, this space is not enough for hydraulic connections. We suggest to prepare a niche in correspondence of the fittings and to connect the thermal cookers with flexible pipes. Once the thermal cooker is connected, it can be placed close to the wall and the flexible pipes will enter in the niche.

3.3 LATERAL CONNECTIONS

On each RTE – RTVE model it is possible to have, on demand when ordering, the boiler connections on the side of the thermal cooker in proximity of the combustion chamber. In this case, to make the installation easier, there are two going connections (for hot water circuit and heating) and two return connections (for hot water circuit and heating). Anyway it is necessary at least the connections of the two connectors with bigger diameter.

RTE - RTVE
with connections on the side

2) Going connection ø 1"¼ female
5) Return connection ø 1"¼ female
6) Return discharge ø ½" female
7) Going connection heating circuit ø 1" female
8) Return connection heating circuit ø 1"female



Picture 22 - Hydraulic connections scheme for RTE / RTVE models with connections on the side (lateral sight).

3.4 INSTALLATION MODES

The technical law (UNI 10412-2:2006) has introduced the possibility to install the solid combustion based devices matched with devices with closed expansion tank, endowed with thermal discharge with emergency exchanger inside the boiler. RTE - RTVE thermal cookers are endowed with all the predispositions for the thermal discharge.
RTE – RTVE thermal cookers can be installed with open expansion tank, in this case you should use the going connector to connect also the safety pipe and the return connector also for the pipe of discharge.
RTE - RTVE thermal cookers may also be installed with closed expansion tank making the thermal discharge system and then connecting the connectors as described forward.

3.5 THERMOSTAT

RTE - RTVE thermal cookers are endowed with thermostat to control the working of the pump. The thermostat, or a control unit with the same function, must be always used when there is a circulation pump in the system.
The thermostat must be placed outside the device with the temperature detector inserted in an appropriate hole in the rear part of the thermal cooker. The thermostat must guarantee that the pump works when the boiler hot water temperature overtakes the set temperature.

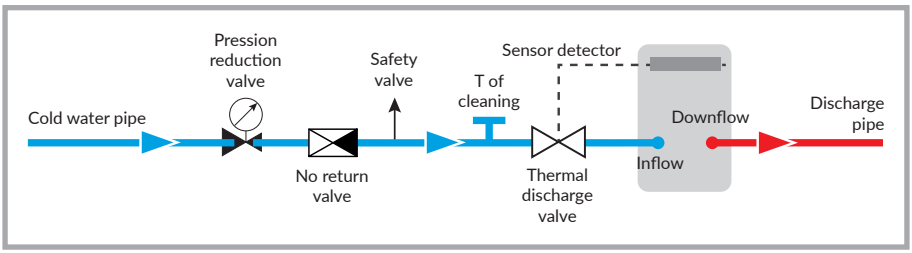
WARNING! For a longer duration of the boiler of the thermal cooker, you must not make circulate the water with temperatures lower than 55-60° C. Lower temperatures generate acid condensation and gas-black on the walls of the boiler.

3.6 SAFETY

On every solid combustible based boilers it is not technically possible to break the combustion immediately as happens for boilers based on liquid or gas combustible according to necessity. For this reason, it is mandatory to swallow always the produced heating also even if the heating system does not request that and also in case of lack of AC power. On contrary, the water in the boiler could boil without possibility of outlet, with serious danger of explosion of the boiler and serious injury risk for the people present near the thermal cooker. For this reason, we recommend to follow strictly what is written in UNI 10412-2 law in the various cases and we suggest also to insert in the system also a boiler able to accumulate the heating in excess produced as sanitary hot water.

3.7 THERMAL DISCHARGE

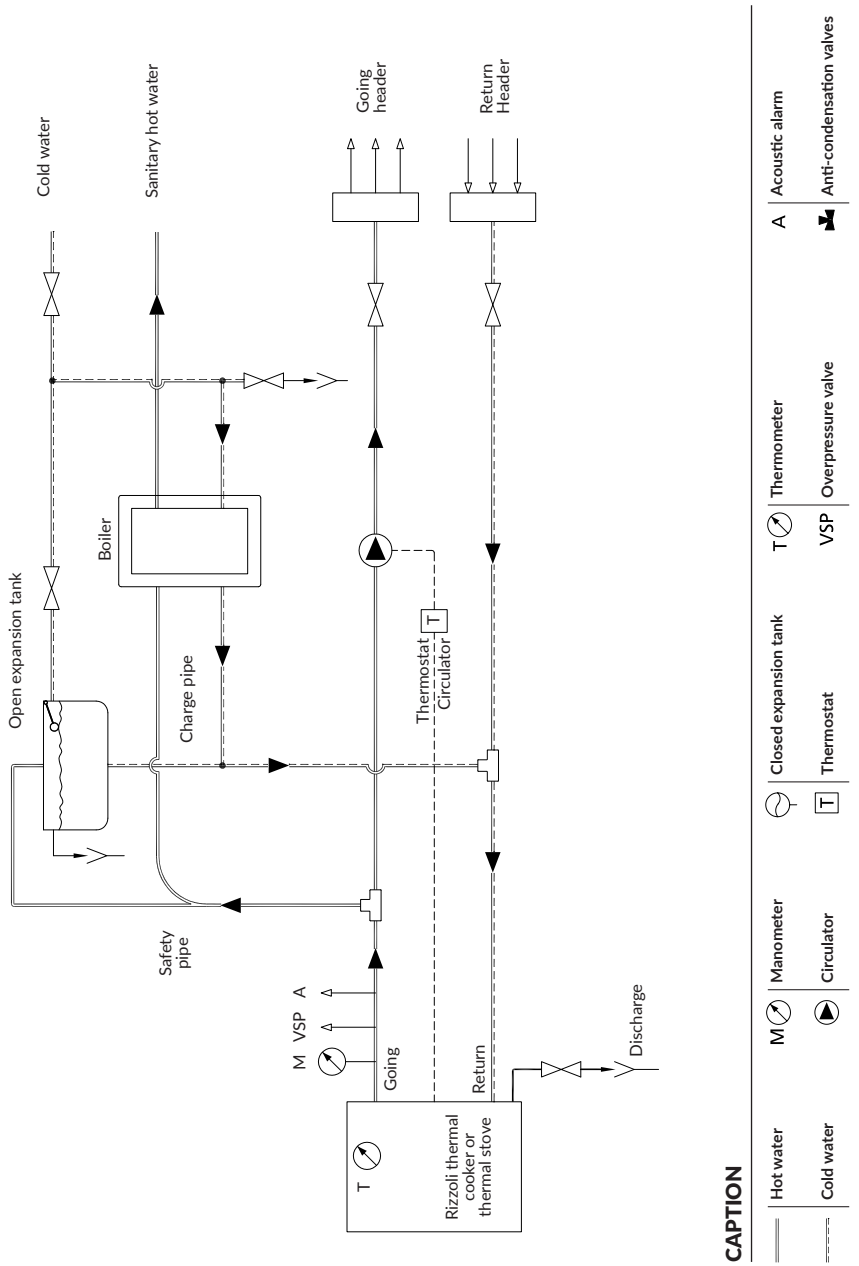
For more safety, it is possible to make an auxiliary circuit of thermal discharge connected directly to the boiler. The thermal cooker has a predisposition for this solution. The thermal discharge system allows to cool directly the boiler
when it is necessary by making flow cold leaking water in a separate circuit inside the boiler. The making of the thermal discharge system is under responsibility of the installer. All the components of the thermal discharge system external to the thermal cooker must be obtained by third parts according to the specifies of designer and installer. To make this auxiliary system it is necessary to make the going and return connections, that are interchangeable, the detector that rules the device must be inserted in the apposite connection bulb. The system, to be effective, must be able to work and must have availability of cold water also in case of lack of AC power. The safety devices must be accessible also after the installing for the maintenance and the functional verify. The functional verify must be done regularly: we suggest at least once a year. The thermal discharge circuit must not be used for the production of hot water for domestic use.
On demand, Rizzoli can give a thermal discharge valve appropriate for the use with its thermal cookers.



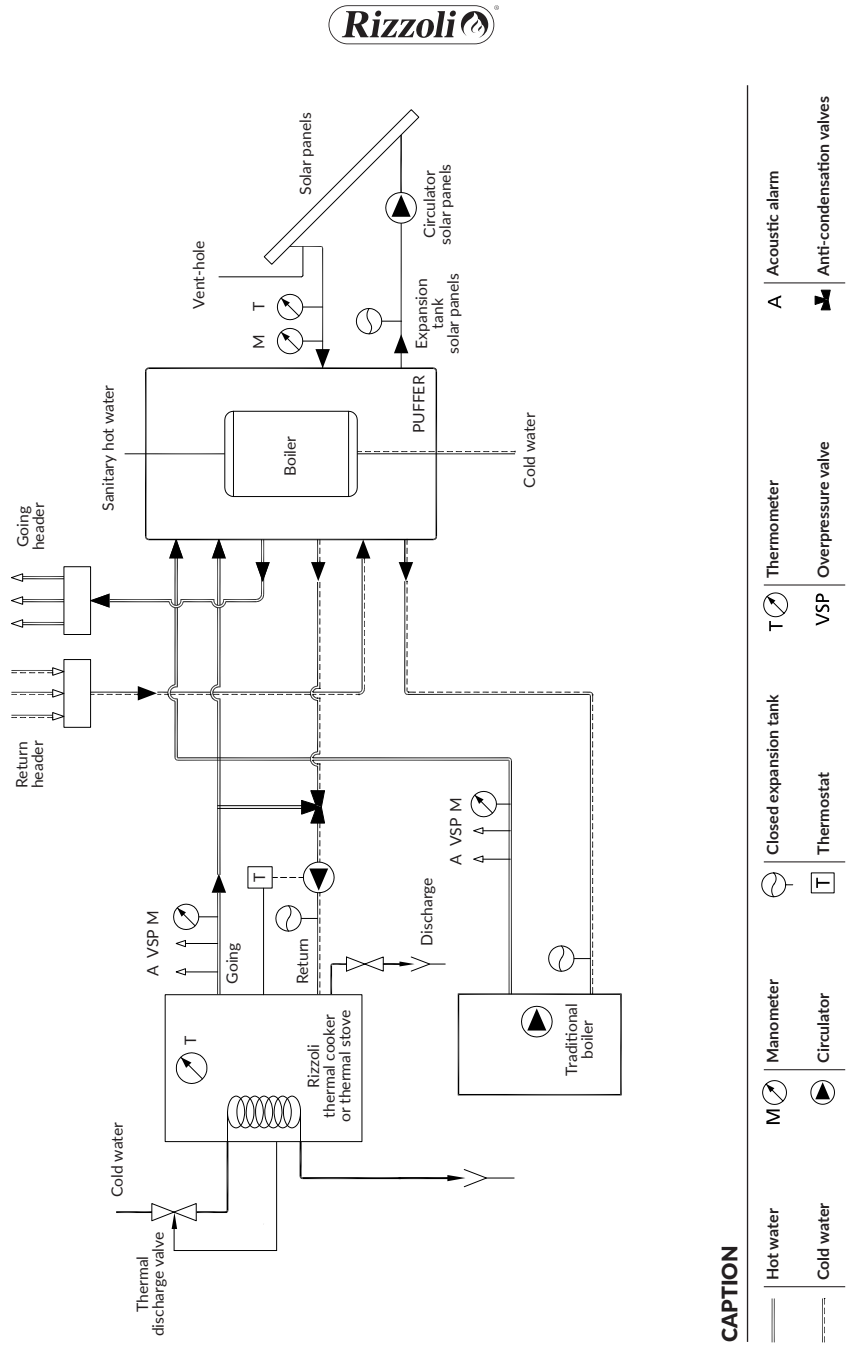
Picture 23 - Thermal discharge circuit scheme.

3.8 EXAMPLES

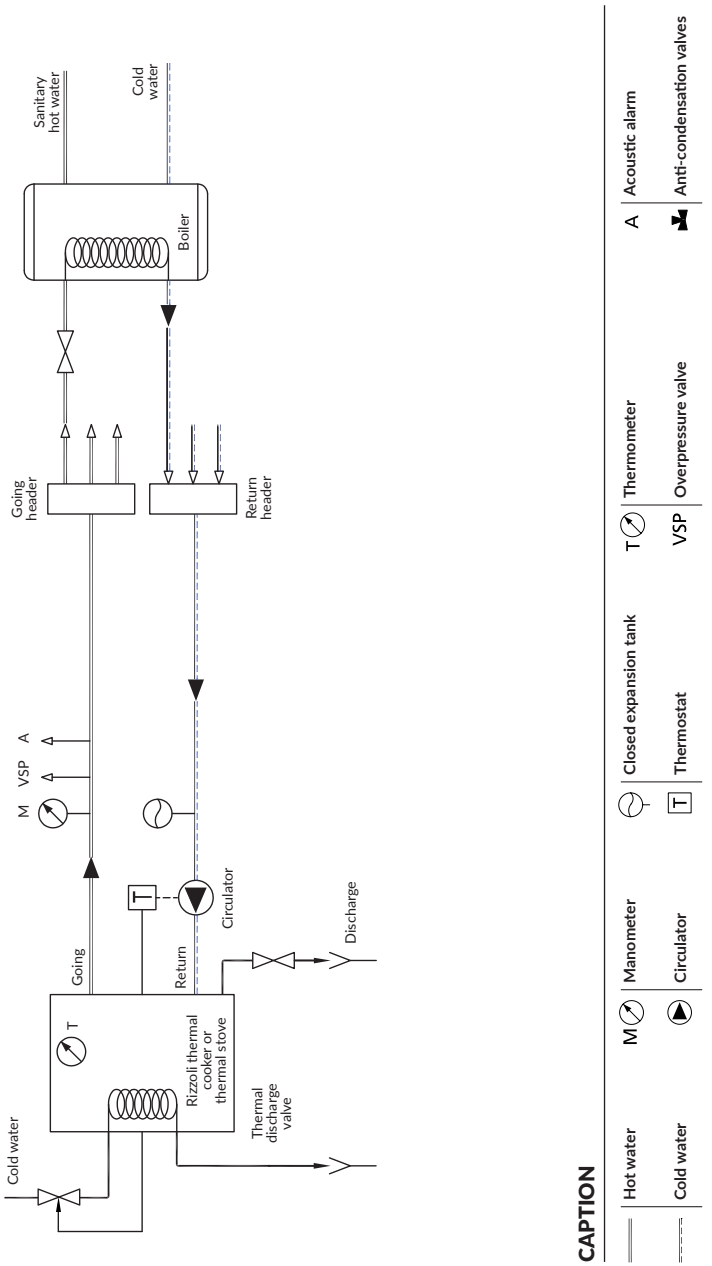
Here are some examples of possible system realization. These schemes are just valid as example and must not be used in the making of the system. Ask always a thermal technician for an installation that best suites your needs.



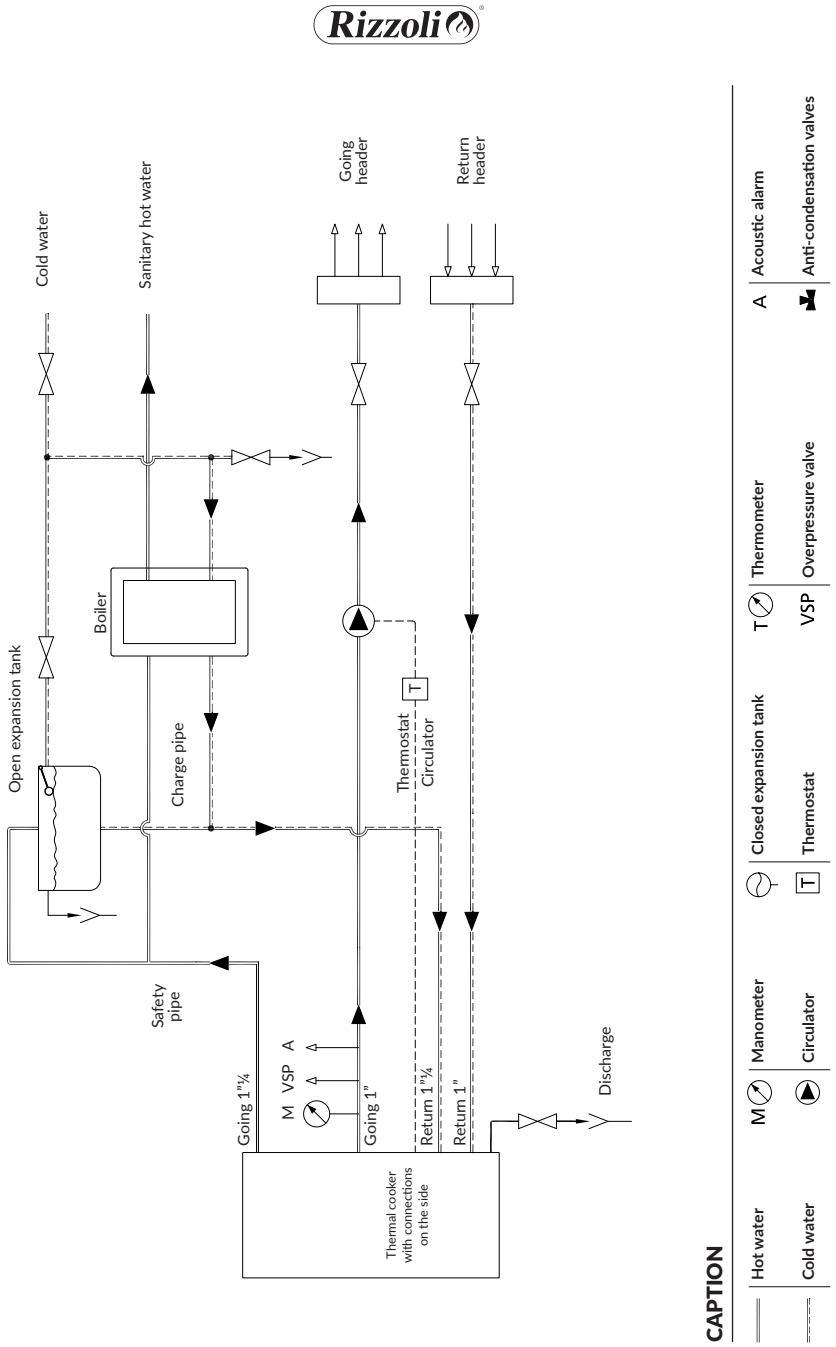
Picture 24 - Schemes for the installing of a heating system with the thermal cooker as heat generator.



Picture 25 - Schemes for the installing of a heating system with the thermal cooker as heat generator.



Picture 26 - Schemes for the installing of a heating system with the thermal cooker as heat generator.



Picture 27 – Schemes for the installing of a heating system (RTE - RTVE with connections on the side) with the thermal cooker with double fittings as a heat generator.

4 USE

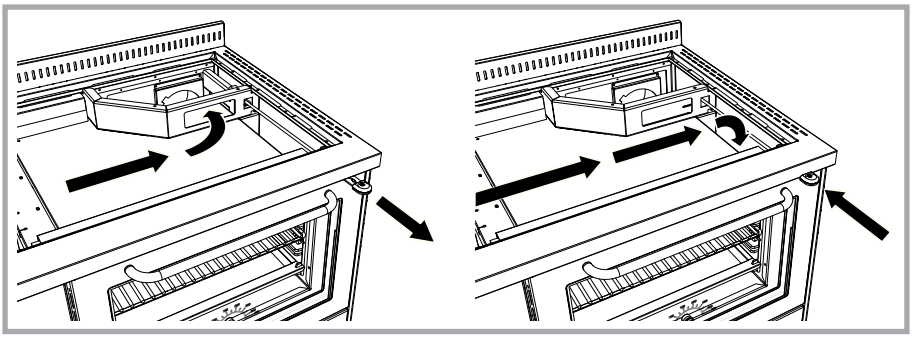
4.1 WORKING OF THE THERMAL COOKER

During the working, inside the thermal cooker happens a combustive reaction of combustible (the wood inserted in the combustion chamber) and comburent (the oxygen present in the air of the room in which the thermal cooker is placed). The wood fired thermal cooker makes an intermittent combustion: after the lighting, the combustion goes on till the exhaustion of the combustible but it can be maintained lighted by making another load of combustible and so on. The maintenance of the combustion in time is guaranteed by the correct working of the chimney, which allows to evacuate the fumes and in the same time to feed the flame with comburent air. In this way, the features of the chimney have a big influence on the correct working of the thermal cooker. The combustion of wood requests that the air flow inside the combustion chamber happens in different points to obtain the maximum efficiency. In particular, it is present a primary air feeding that flows in the lower part of the combustion chamber by the grill, and one or more secondary air feedings that flow in the upper part of the combustion chamber. The primary air is the main air and regulates the combustion speed. The secondary air allows the post-combustion of the fumes, generating further heating, knocking down the amount of harmful gas and so improving both the rendering and the impact on the environment. Once started the combustion it cannot be interrupted in a safe way: it must be always faded out naturally with the exhaustion of all the combustible inserted.

WARNING! For the correct working of the wood fired cooker verify that the passage of comburent air is not obstructed or, in case of connection with external air intake, that the air aspiration grill is not obstructed.

4.2 STARTING

To allow an easier lighting of the thermal cooker with cold chimney, wood fired thermal cookers are endowed with starting key governed by a rod: if you extract this rod, the key opens. The opening of the key creates a direct connection between the combustion chamber and the chimney, in order to



Picture 27 - Starting key. With lever outside, the key is open and the starting is easier; with lever inside the key is closed for the normal working

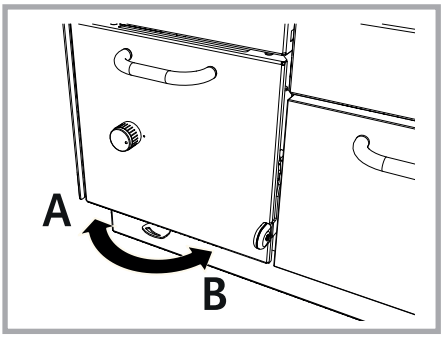
obtain a better draught. To light the fire, you can use well dried wood, very subtly cut, together with the specific products you can find in commerce. The combustion may be difficult as long as the chimney is cold. The necessary time depends on the chimney and on the weather conditions. When the fire becomes powerful you must turn off the key in order to force the fume to heat the other parts of the thermal cooker. The thermal cooker is designed to work with the key turned off, the use with the key opened does not allow the thermal cooker to work at its best and may cause overheating and consequent damages.

4.3 AIR REGULATION

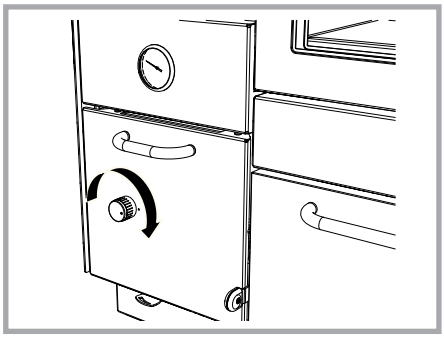
On each model there are two air regulations: external air intake lever, primary and secondary air regulation.
The entrance of comburent air inside the cooker is regulated by a valve ruled by a lever placed below the ash door. The valve is closed in the right position while is open in the left position. To regulate this device, see picture 29. In case of model with flue outlet on the left, the regulation of the lever is symmetrical (valve closed in the left position, open in the right position)
The primary air regulator, located in the front of the cooker, is ruled by a graduate hand grip which regulates the combustion speed. Low values ensure less power and bigger autonomy. High values ensure more power and less autonomy. The regulator is automatic and maintains steady the heating produced by the cooker.
The secondary air is set automatically according both to the setting of opening of the air entrance lever and to the primary air lever and the effective working conditions and draught of the device.
The air introduced in correspondence of the fire door is fixed and set to allow an optimal combustion and, in case of RTVE thermal cookers, to keep clean the glass.
When the thermal cooker is cold, we suggest to close the lever below the ash door and set the primary air regulator to value 0, in order to limit the undesired air flow that may cause an anticipated cooling of the device and the room. This operation is particularly important when the external air intake of the cooker is directly connected. Generally, for an optimal working of the device, it is suggested to follow the indications for the regulation of air reported in table 4.

Condition	Air intake lever	Primary air	Grill	Starting key
Starting	Open	Open (7/8)	-	Open
Fast cooking	Open	Open (7/8)	High	Closed
Slow cooking	Half open	Half open (3/4)	High	Closed
Fast heating	Open	Open (7/8)	Low	Closed
Slow heating	Half open	Closed (1/2)	Low	Closed

Table 4 – Regulations of the thermal cooker according to the different usages.



Picture 29 – Regulation of the air intake lever. The valve is open in correspondence of the position indicated by letter "A" while it is closed in the position indicated with letter "B".

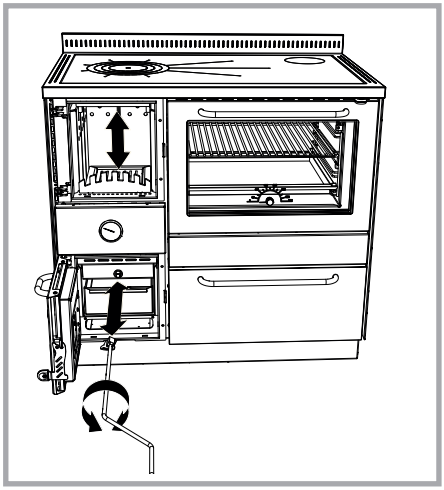


Picture 30 – Regulation of primary and secondary air. The regulator opens rolling the hand grip clockwise.

WARNING! On RTVE thermal cookers,when loading wood, it is recommended to keep a distance of some centimetres between the fire door and the combustible, in order to not expose the glass to high temperatures that could damage it.

4.4 GRILL REGULATION

The thermal cookers are endowed with an height adjustable grill which allows to adjust the combustion chamber's dimensions according to user's needs. The upper position allows to have the flame in direct contact with the plate, it is the best position for cooking. The lower position instead allows to have a more capacious combustion chamber and so to have more autonomy, it is the best solution to keep the room warm for a longer time. The grill must be regulated with cold thermal cooker using the special tool given together with the thermal cooker, the connection point to regulate it is placed inside the ash drawer.



Picture 31 - Regulation of fire grill's height

4.5 PLATE COOKING

The radiant plate is designed to allow a fast and simple cooking. The hotter part is situated in correspondence with the hotplate, this is the best part for placing a pot which must get warm quickly. The external parts of the plate are better to keep foods warm. To obtain the maximum cooking speed you have to use broken and thin wood and make the regulations as described in the previous chapters. The plate must not be overheated and made red hot because in such way the thermal cooker may experience damages without having no advantage for the cooking of foods.

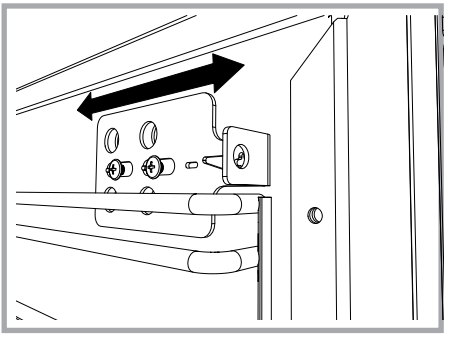
4.6 OVEN COOKING (THERMAL COOKERS WITH OVEN)

The internal temperature of the oven depends on the combustion speed and on the amount of combustible used. In particular, working in the primary air regulator and so on the speed combustion, you can obtain a more steady combustion in order to avoid sudden changes in temperature inside the oven. If you want to heat the oven starting from cold thermal cooker, we suggest to increase the temperature with bright fire and then to decrease the speed combustion to keep the temperature steady. The thermal cookers with oven are endowed with fire door with glass and thermometer that makes easier the temperature controlling operations; the temperature indicated by the thermometer is approximate ad is useful only for the cooking of foods. If you want to brown the meals, you should keep them in the upper part of the oven: instead, if you want to cook in a steadier way you should keep the meals in the centre. When you do not use the oven, we suggest to keep the oven's door slightly open in order to let the heat go outside the thermal cooker: an overheating can damage the thermal cooker.

For example, to cook the spineless person biscuits in a correct way, it is necessary the pre-heating of the oven at a temperature indicated on the thermometer of 150°, keeping it in temperature by adding some kilograms of wood for every charge as the reaching of the coals. Once the temperature becomes stable, insert the baking-pan with the biscuits in the central position in the oven for 10 minutes, then extract the baking-pan, rotate it and reinsert it again in the central position for other 5 minutes. In the end, remove the baking-pan from the oven and leave cool the biscuits.

4.7 STEAM EXCESS VALVE (THERMAL COOKERS WITH OVEN)

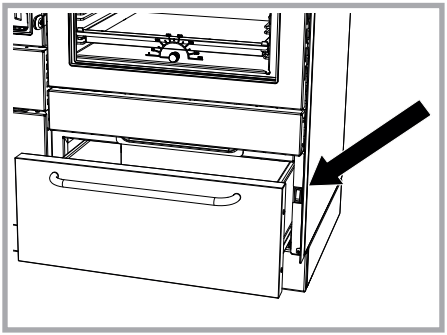
Cooking meals sometimes may generate a steam excess inside the oven. For this reason on models with oven there is a valve that allow to eject the steam in excess. The valve is placed inside the oven on the lateral side towards external and when necessary it shall be regulated to open the air intakes. To avoid possible burns, it is recommended to regulate the valve only before the lighting of the thermal cooker.



Picture 32 - Steam excess valve.

4.8 OVEN LIGHT (THERMAL COOKERS WITH OVEN)

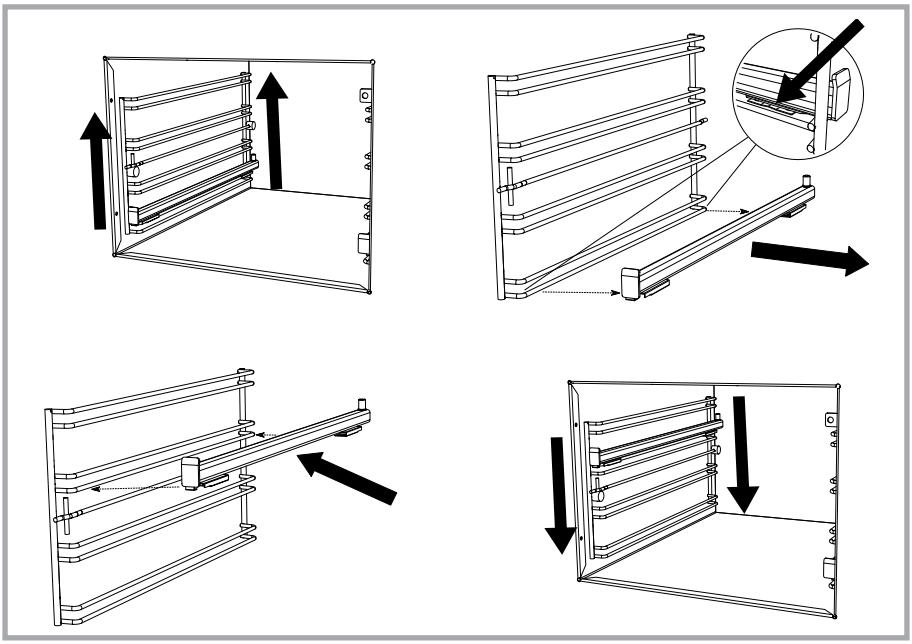
The thermal cookers with oven have a light inside the oven which, together with the wide glass of the door, allows to control the cooking process at sight without opening the door. The lighting switch is located on a lateral upright you can find extracting the wood box.



Picture 33 - Switch to light the oven.

4.9 TELESCOPIC PULLOUT FOR BAKING PAN (THERMAL COOKERS WITH OVEN)

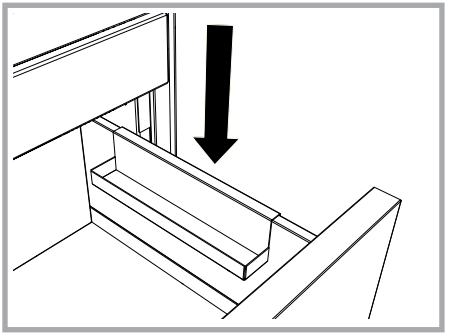
All the wood fired thermal cookers with oven have a telescopic pullout for endowed baking pan system. In this way, it is possible to extract the baking pan without the necessity to sustain it, ensuring a better practicality. The telescopic pullout is placed in a single position inside the oven but this can be changed by moving it in the lowest part or in the middle-upper and upper position. To make this, see picture 34.



Picture 34 - Instructions for the variation of the position of the telescopic pullout.

4.10 GLOVE BOX (THERMAL COOKERS WITH OVEN)

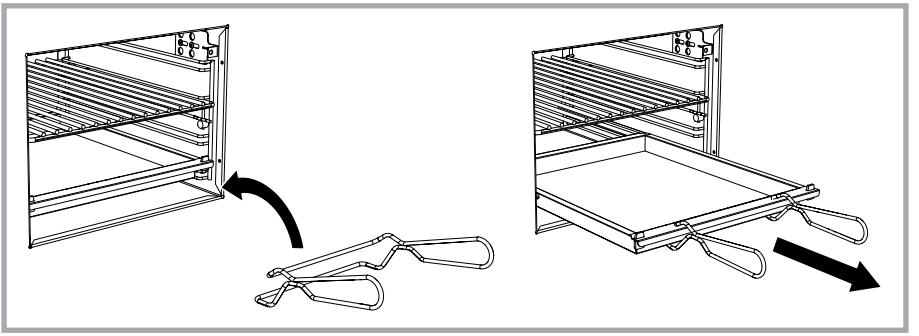
Inside the wood box you can find a small glove box that can be useful to keep the smallest tools, that in this way remain separated from the wood.



Picture 35 - Glove box fixed on the wood box.

4.11 BAKING-PAN HOLDER (THERMAL COOKERS WITH OVEN)

The baking-pan holder allows to extract the baking-pan in a safe way, with no need to use rags or hot pads. The baking-pan holder must be hooked to the baking-pan edge and used with two hands.



Picture 36 - Baking-pan holder.

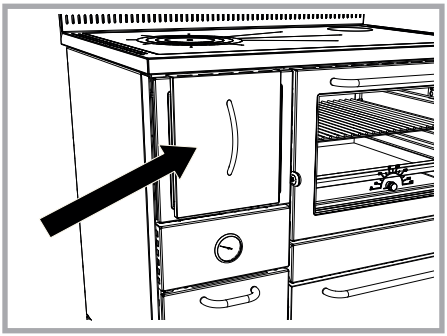
4.12 WOODBOX EXTRACTION (THERMAL COOKERS WITH OVEN)

The woodbox is endowed with a sliding rails system that allows an easy closure. It would be enough to juxtapose the box to close it automatically. For cleaning or other reasons it could be necessary to remove the woodbox. To do this, it is necessary to extract the woodbox to limit switch, then lift it slightly and at the same time extract it again. To reinsert the woodbox repeat the operations in the opposite sense.

WARNING! Do not put inflammable products in the woodbox! The objects placed inside must not reach the upper wall of the woodbox.

4.13 FIRE DOOR PROTECTION (OPTIONAL)

For RTVE range thermal cookers it is possible to request a steel protection which could be placed on the fire door. This protection is designed to shield the door when the cooking operations require the continuous presence of the user in front of the cooker or in presence of children. In the other situations the use of the protection depends on your discretion. The placing operations must always be done with cold cooker opening the fire door and placing the protection on the door by joint.



Picture 37 – Fire door protection.

4.14 PLATE COVER (OPTIONAL)

On every cooker it is possible to use a stainless steel plate cover, made to cover the plate in the periods in which the cooker is not used. In this way you obtain an uniform desktop. The plate cover must be used with cold cooker. Before placing it, be sure that is not present humidity, that the plate is clean and that all the necessary maintenance is done.

5 MAINTENANCE

5.1 CLEANING

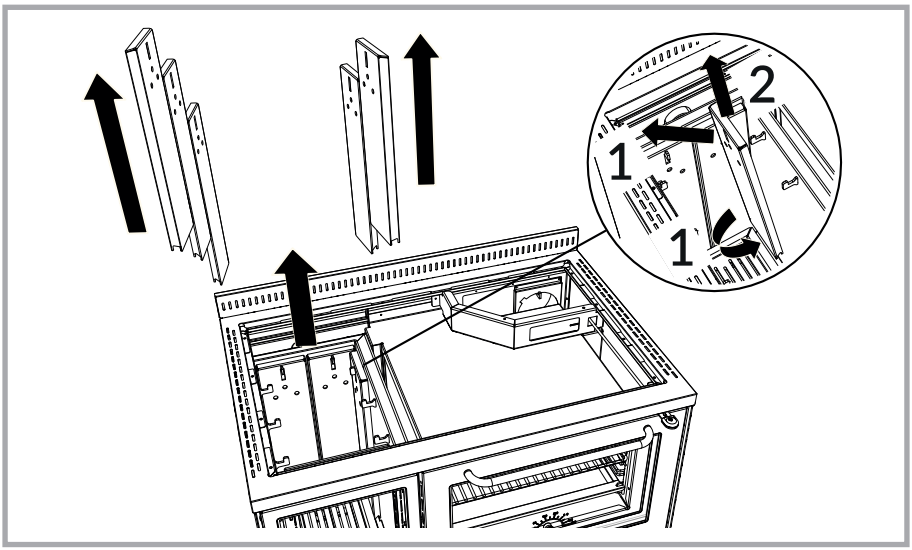
The thermal cooker works better if all its parts are without combustion residuals, a clean thermal cooker will be less exposed to problems due to wear. Cleaning frequency depends on how much and how the thermal cooker is used, as well as on combustible quality.

WARNING! All these operations must be done with cold thermal cooker.

5.2 CLEANING THE VISIBLE PARTS

Stainless steel parts have to be cleaned cold with neutral detersives or with a specific solution for stainless steel in case of hard to remove dirt. Do not use at all abrasive sponges that may scratch the surface. Dry with a soft rag, following the glazing wise.
In some cases, after the installation or after the cooking of meals, it might appear a superficial oxidised stratus, in particular on the stainless steel frame. Also in this case, an accurate cleaning will make the cooker as new.
On request Rizzoli gives specific products to clean stainless steel. For enamelled or painted parts, do not use abrasive and aggressive or acid detersives, in case of stains pour some oil and wait while it absorbs the halo, then clean with a soft rag. We recommend not to use solvents or denatured alcohol on painted parts.

5.3 MAINTENANCE OF THE COMBUSTION CHAMBER SHEETS



Picture 38 – Maintenance of the combustion chamber sheets

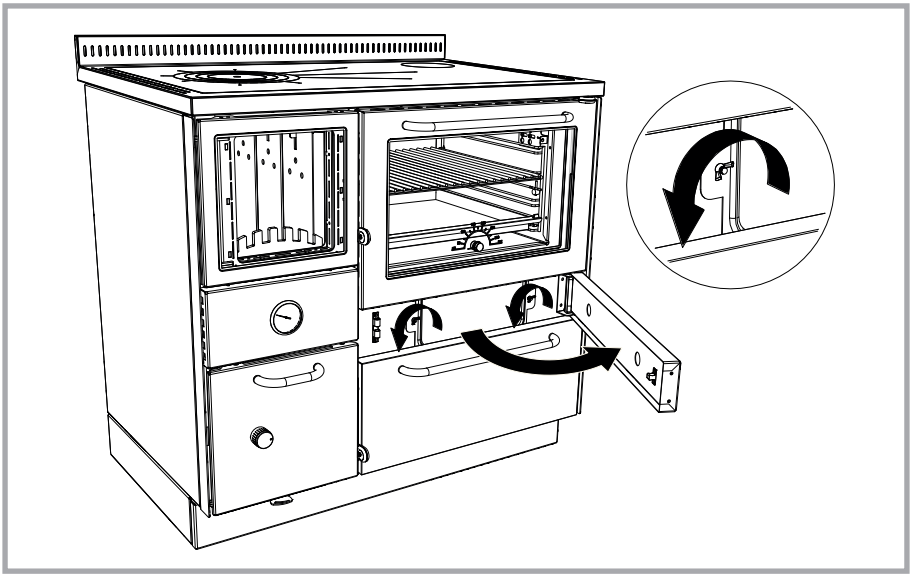
Inside the combustion chamber of the wood fired thermal cooker are placed some mobile steel sheets that have a double function: they allow the entrance of the secondary air after-combustion at an optimal height for the reduction of the emissions and they protect the integrity of the boiler acting as protective shield between the flame and the wall of the boiler.
Anytime it is necessary a deeper ash cleaning, when the thermal cooker is cold it is possible to remove these sheets. To do this, it is necessary to remove the hotplate disc or the circles.
Then it is necessary to remove the plate in order to have more space to do the operation. At this point, remove the sheets starting from the sides of the combustion chamber and last the ones placed in the rear part, unhooking them from the pin and unthreading them up.
To reassembly the sheets it is necessary to do the reversal operation, paying attention to insert them in the correct position and in the correct order, placing in the first time the base and then hooking them to the pin.

5.4 GRILL CLEANING

Every time you use the thermal cooker you have to clean the wood carrying grill before, at least you have to clean the more rough deposits: the holes of the grill should not be obstructed. To make this you can use the poker given together with the thermal cooker. If the grill is not well cleaned, the flame could not be well feed and so you could experience an irregular combustion. If the grill is being removed, it must be placed in its housing with the flat part turned upwards.

5.5 FUME-CIRCUIT INSPECTION

In the thermal cookers with oven the combustion fumes are forced to turn completely around the oven. For this reason, the thermal cookers with oven are endowed with an inspection door to clean the fume-circuit. The cleaning must be done at least every six months of normal use, like for the chimney sweeping: according to use, you could have to make the cleaning more often. The inspection door is located under the oven door opening the apposite wing.



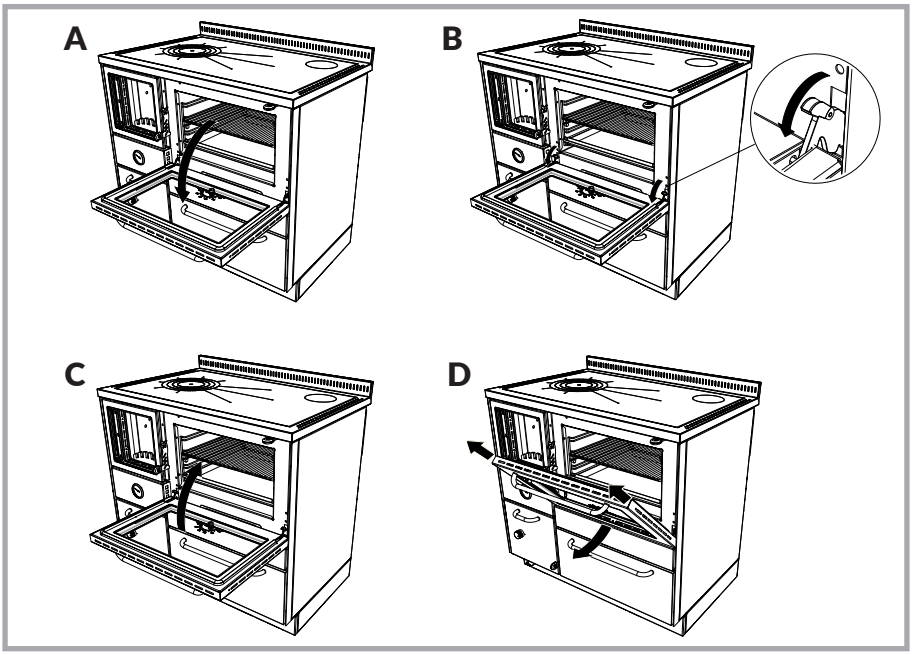
Picture 39 - Fume-circuit inspection.

5.6 ASH BOX

Every time you use the thermal cooker you have to check the ash box located under the combustion chamber. When the box is full, you have to empty it. If you do not empty it, the ash accumulates itself and makes the cleaning more difficult. In case of excessive cinders the flame could not be well fed and you could experience an irregular combustion.

5.7 OVEN CLEANING

The oven must be cleaned with apposite products available in commerce, to make this operation easier you can remove the oven door. To make this you have to open the oven door and raise the tongues located on the door's hinges. Now, you can unhook the door from the thermal cooker closing it softly and lifting the lower part of the door. To hook again the door to the thermal cooker, make the same operations reversed. Also the grids on the sides could be removed to make the cleaning more simple.



Picture 40 - Unhooking the oven door from the cooker

5.8 CHIMNEY CLEANING

The cleaning of the chimney must be done by experienced technicians at least every six months of normal use of the thermal cooker. Anyway, cleaning must be done every time it becomes necessary according to the use or to the combustible used. We recommend to follow strictly all the local laws dealing about chimney cleaning. All the parts of the chimney must be cleaned. Together with the cleaning of the chimney, make also the internal cleaning of the thermal cooker, removing the plate and cleaning the upper part of the oven and the fume-circuits. After the cleaning of the chimney, be sure to have closed all the inspections doors in order to avoid draught problems.

WARNING! If the chimney cleaning is not made as recommended, fire in the flue could happen.

5.9 GLASS CLEANING

The glasses of the fire door and, in RTVE range models, of the combustion chamber, can be cleaned with normal specific products you can find in commerce. The internal part of the combustion chamber door is designed to clean itself during the use of the cooker. Anyway, sometimes you could have the need to clean also the glass in touch with the flame of combustion.

WARNING! Do not clean the glass before waiting for its cooling. Suddenly changes in temperature may cause breakings in the glass.

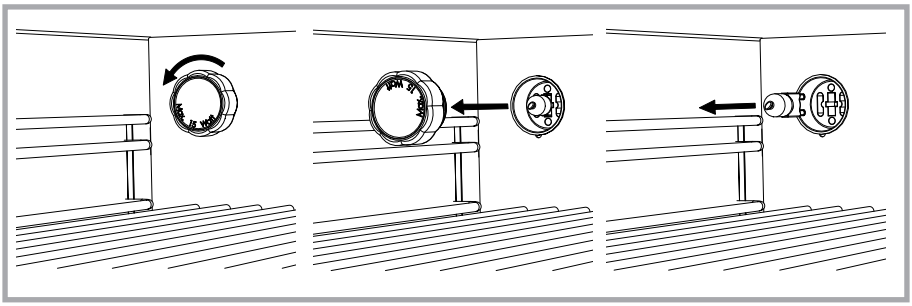
5.10 PLATE CLEANING AND MAINTENANCE

Radiating plates in special steel need regular maintenance, in particular they need cleaning after every use that brings moisture or dust on the plate itself. With cold thermal cooker you have to remove all the pots and boilers that could maintain moisture on the plate. Together with the thermal cooker are given some exclusive products, studied for the cleaning and the maintenance of the plate: the abrasive sponge, the cleaning oil and the plate care oil, on how to use them please read the instructions written on the bottles. The plates are all worked in with non acid anti-corrosion oil. The use of the thermal cooker deletes this oil layer and so the contact with water may cause small rusty stains. In this case you have to wipe the plate with a rag soaked with non acid oil. If the rusty stain is not being cleaned, you could have to wipe the plate with a lightly abrasive paper or with the abrasive sponge given together with the thermal cooker. To restore the protecting layer wipe the plate with little oil. Do not clean the plate with water. It is important to be sure that the expansion cuts and the hole between the plate and the frame are not obstructed by dust or by other residuals: the plate could suffer deformations, also permanent. When it is necessary, you should clean also the beating of the circled removing eventual residuals. Radiating steel plates, exposed to continuous heating, trend slowly to take a burnished colour; if you want to accelerate the process, repeat frequently the oil wiping. If the thermal cooker is not used for long periods, it is suggested to treat the plate with the plate care oil, in this way the plate is well protected from moisture. To remove the plate, you have to lift it up. When you reinsert the plate, keep in mind to leave the 1 or 2 millimetres to allow the thermal expansion of the plate itself.

5.11 MAINTENANCE OF THE LIGHT

WARNING! Before starting any maintenance operation for the light, you must disconnect it from AC power and be sure that the thermal cooker is not powered. Verify also if the thermal cooker is cold and if the light was turned on in the previous minutes.

Oven lamp suffers high temperatures. Even if it is designed to work in these conditions, it could become out of order. You have to replace it with a lamp with the same features (halogen lamp 25W 230V 300° connection G9). To replace the lamp you have to unscrew the lamp cover, remove the lamp, insert the new lamp and finally screw in the lamp cover. Seldom, it is necessary to clean the glass of the lamp cover. To make this, you have to unscrew the lamp cover, remove the external residuals due to the cooking steams, wash the lamp cover and once it is dry you can screw it in its place.



Picture 41 - Take-down the oven lamp.

5.12 THERMAL EXPANSION

During the use, all the materials of the thermal cooker are subjected to expansion and little movements due to the variation of temperature. This must not be prevented, otherwise deformations and breakings might happen. For this reason, the spaces which allow the expansion inside and outside the thermal cooker must be kept free and clean.

5.13 EXTRAORDINARY MAINTENANCE

Most of the thermal cooker's parts are easy to remove with a simple screwdriver, eventual repairs or modifies will be faster if the concerned piece, directly or by a dealer is sent to our factory. If you need accessories or spare parts, please tell us the the serial number of the thermal cooker indicated in the green booklet given together with the wood fired thermal cooker. The serial number is also indicated on a plate placed on the side of the wood box.

6 WHAT TO DO IF...

Problems	Effects	Possible solutions
Bad working	Irregular combustion. Incomplete combustion. Smoke comes out of the plate. Smoke comes out of other parts of the cooker.	• Verify that all air regulations are at their maximum opening • Verify that ash or other residuals do not obstruct the grill • Verify that the grill is not inserted correctly (the flat part is up) • Verify that the place in which the cooker is situated is well aired and that aspiring hoods or other devices are not working • Verify the correct dimensioning of the chimney and of the entrance of the chimney • Verify that the chimney is not obstructed and that it was cleaned recently • Verify that there are no losses in the exhaust-pipe and in the conjunctions • Verify that no other devices are connected to the flue • Verify that the chimney suites the position in which it is situated, in windy places you could have to install an anti-wind chimney • Verify that the combustible is right, dry and of good quality • Verify that the chimney does not go on under the wood fired cooker
Bad working	Bad working due to bad weather	• Allow the flow of air in the room • Open slightly the ash door when you start the cooker • Eventually, use a windproof chimney-pot
Fire	The chimney and other parts near the cooker take fire	• Close all the air regulations of the cooker • Close doors and windows of the room in which the cooker is placed • Call the firemen
Overheating	The cooker overheats. Oven's thermometer is over 300° C	• Close all the air regulations and if it is necessary open the oven door
Heating of oven is weak	The oven does not reach high temperatures	• Verify that oven door is well closed • Verify that the starting key is closed • Set all air regulations to their maximum opening • Use good quality wood, well dried and little patched • Verify that combustion has strong flame
Condensation	Condensation is created inside the cooker; it may be caused by humidity inside the walled parts. After the first lightings it is normal the creation of some condensation inside the new cooker.	• Verify to use good and well seasoned wood • Verify that the chimney has not imperfections • Verify that the chimney is well isolated • Verify that the chimney is not over dimensioned • Verify that the cooker had the time to dry and to balance itself
Condensation in combustion chamber	Condensation is created on the walls of the boiler, a layer of spoot or tar hard to remove is produced.	Verify the activation temperature of the circulation pump, it must not be lower than 55-60 °C • If big hot water accumulation tanks are present, we suggest to install a valve or anti-condensation system.

Lighting failed	It is not possible to light the cooker.	• Air the place • Open the starting key • Use well dried wood • Burn specified product existing in commerce • Verify that no other combustion based device is working in the same room. • If necessary, open slightly the ash door for the time necessary for a safe lighting.
Rust	Presence of rust and deformations on the plate.	• Do not clean the plate with water • Do the regular maintenance of the plate as describe • Contact your dealer or the customer service

7 TECHNICAL DATA

7.1 TECHNICAL DATA

Model	RTE 60 RTVE 60	RTE 80 RTVE 80	RTE 90 RTVE 90
Weight	193 kg	235 kg	260 kg
Nominal power	18,6 kW	22,3 kW	22,3 kW
Nominal power given to water	8,5 kW	15,1 kW	15,1 kW
Nominal power given to environment	10,1 kW	7,1 kW	7,1 kW
Efficiency	79,0 %	75,7 %	75,7 %
Emissions CO (13% O_2)	0,87%	0,11%	0,11%
Chimney vacuum	12 Pa	12 Pa	12 Pa
Exhaust gas temperature (*)	259 °C	193 °C	193 °C
Exhaust gas flow	11,7 g/s	36,8 g/s	36,8 g/s
Boiler capacity	15 liters	15 liters	15 liters
System pressure (max)	3 bar	3 bar	3 bar
Combustible consumption	4,7 kg/h	7 kg/h	7 kg/h
Max. combustible quantity	6 kg	7 kg	7 kg
Autonomy	1 h	1 h	1 h
Electric power	-	25 W	25 W
Tension	-	230 V	230 V
Frequency	-	50 Hz	50 Hz

(*) Average temperature at nominal power. It is possible to obtain higher instantaneous exhaust gas temperatures. It is recommended to use always pipes with minimum specify T400.

Model	RTE 60 l.e. RTVE 60 l.e.	RTE 80 l.e. RTVE 80 l.e.	RTE 90 l.e. RTVE 90 l.e.
Weight	193 kg	235 kg	260 kg
Nominal power	5,7-11,1 kW	11,3 kW	11,3 kW
Nominal power given to water	2,6-5,7 kW	6,5 kW	6,5 kW
Nominal power given to environment	3,1-5,4 kW	4,7 kW	4,7 kW
Efficiency	83-83,2 %	80,3 %	80,3 %
Emissions CO (13% O_2)	0,12-0,13%	0,11%	0,11%
Exhaust gas temperature (*)	160-222 °C	201 °C	201 °C
Exhaust gas flow	6,9-8,7 g/s	13,4 g/s	13,4 g/s
Boiler capacity	15 liters	15 liters	15 liters
System pressure (max)	3 bar	3 bar	3 bar
Combustible consumption	1,5-3 kg/h	3,2 kg/h	3,2 kg/h
Max. combustible quantity	6 kg	7 kg	7 kg
Autonomy	1 h	1 h	1 h
Electric power	-	25 W	25 W
Tension	-	230 V	230 V
Frequency	-	50 Hz	50 Hz

(*) Average temperature at nominal power. It is possible to obtain higher instantaneous exhaust gas temperatures. It is recommended to use always pipes with minimum specify T400.

7.2 EMISSIONS ACCORDING TO BIMSCHV

Model	RTE 60 l.e. RTVE 60 l.e.	RTE 80 l.e. RTVE 80 l.e.	RTE 90 l.e. RTVE 90 l.e.	BImSchV
Nominal power	11,1 kW	11,3 kW	11,3 kW	--
Efficiency	5,7 kW	6,5 kW	6,5 kW	--
Nom. power given to water	5,4 kW	4,7 kW	4,7 kW	--
Nom. power given to envir.	83,2 %	80,3 %	80,3 %	> 75 %
Emissions CO (13% O_2)	1492 mg/m³	1348 mg/m³	1348 mg/m³	< 1500 mg/m³
Dust emissions CO (13% O_2)	39,4 mg/m³	38 mg/m³	38 mg/m³	< 40 mg/m³
BimSchV suitability	Yes	Yes	Yes	--

7.3 EMISSIONS ACCORDING TO 15A B-VG

Model	RTE 60 l.e. RTVE 60 l.e.	RTE 80 l.e. RTVE 80 l.e.	RTE 90 l.e. RTVE 90 l.e.	15a B-VG
NOMINAL POWER				
Nominal power	5,7 kW	11,3 kW	11,3 kW	--
Nom. power given to water	2,6 kW	6,5 kW	6,5 kW	--
Nom. power given to envir.	3,1 kW	4,7 kW	4,7 kW	--
Efficiency	83,0 %	80,3 %	80,3 %	> 72 %
Emissions CO (0% O_2)	1086 mg/MJ	899 mg/MJ	899 mg/MJ	< 1100 mg/MJ
Emissions NOx (0% O_2)	77 mg/MJ	88 mg/MJ	88 mg/MJ	< 150 mg/MJ
Dust Emissions (0% O_2)	28,6 mg/MJ	25 mg/MJ	25 mg/MJ	< 35 mg/MJ
OGC Emissions (0% O_2)	20 mg/MJ	33 mg/MJ	33 mg/MJ	< 50 mg/MJ
REDUCED POWER				
Reduced power	--	5,4 kW	5,4 kW	--
Red. power given to water	--	2,8 kW	2,8 kW	--
Red. power given to envir.	--	2,6 kW	2,6 kW	--
Efficiency	--	87,0 %	87,0 %	> 72 %
Emissions CO (0% O_2)	--	477 mg/MJ	477 mg/MJ	< 1100 mg/MJ
OGC Emissions (0% O2)	--	45 mg/MJ	45 mg/MJ	< 50 mg/MJ
15a suitability (**)	Yes	Yes	Yes	--

(**) For devices with nominal power lower than 8 kW it is not requested the test with reduced power (Vereinbarung Art. 15a B-VG – 31.12.2012)

7.4 SAFETY DISTANCE

Safety distances from inflammable or sensible to heat materials in absence of other isolating systems.

Model	Laterally	Behind	Front	Ceiling
RTE 60 - RTVE 60	25 cm	25 cm	80 cm	60 cm
RTE 80 - RTVE 80	35 cm	35 cm	80 cm	60 cm
RTE 90 - RTVE 90	35 cm	35 cm	80 cm	60 cm

Model	Laterally	Behind	Front	Ceiling
RTE 60 l.e. - RTVE 60 l.e.	25 cm	25 cm	80 cm	60 cm
RTE 80 l.e. - RTVE 80 l.e.	1 cm	1 cm	80 cm	70 cm
RTE 90 l.e. - RTVE 90 l.e.	1 cm	1 cm	80 cm	70 cm