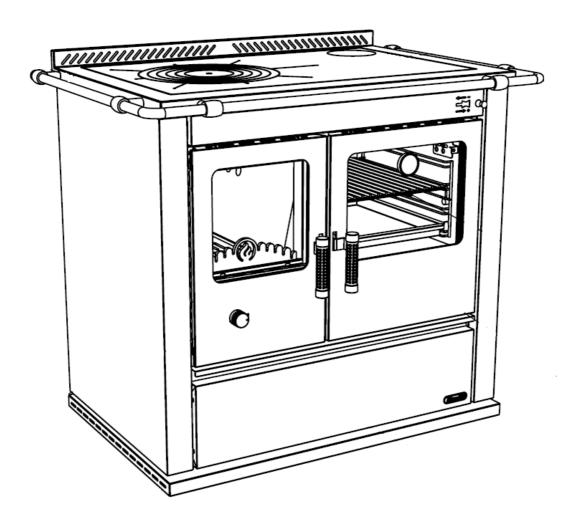
S-ST RANGE

Instructions









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 cookers in every house.

Your choice fell upon a Rizzoli cooker, result of a tradition started in 1912 when Carlo Rizzoli began the production of wood fired cookers with the typical style of the valley in the dolomites. Year after year Rizzoli continued to refine its 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 cookers it is necessary the correct placing and connection to the chimney, to AC power and to the heating system if it is necessary. It is necessary to predispose a duly made chimney and well suited to the model you chose. Before the connection of the device it is necessary to contact a local chimney sweeper. The installation usually ends with the lighting of the 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 cooker regularly.

We recommend to read carefully the instructions in this booklet before starting to use the device. Keep this booklet because it could be useful in case of necessity. Talking about the working and the installation of Rizzoli cookers and 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 device.
- The grids and the ventilation holes of the device must not be obstructed during the installation or the use of the device.
- Extracting fans, if working in the same room where the device is installed, might cause problems when a correct ventilation is not guaranteed.
- 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 device 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 device.
- 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

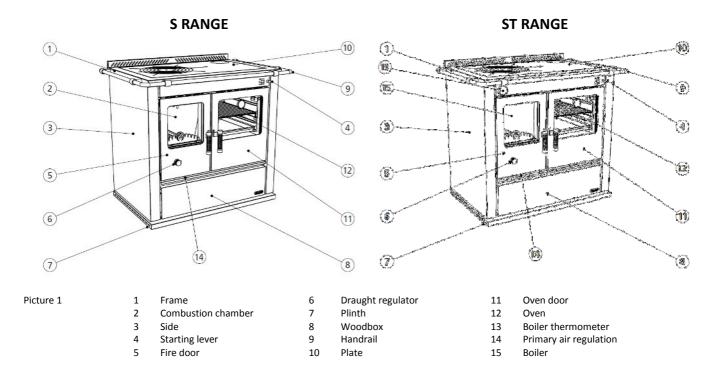
Wood fired cookers S Range and thermal wood fired cookers ST Range are built to use wood for burning. We recommend to use good quality wood, dry, seasoned and possibly broken. Using good quality wood is warranty of good heating power and avoid the forming of carbon residuals and soot. To avoid dissipation of energy and eventual deforming and damaging processes you must not use excessive combustible (see paragraph 7.1).

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 COOKER AND THERMAL COOKER



1.6 ACCESSORIES



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

- Ash drawer
- Glove
- Poker
- Scraper
- Oil for the care of the plate
- Cleaning oil for the plate
- · Abrasive sponge
- Sponge for fire door cleaning
- Hex key for disassembling the handrail
- Restoring screws for the disassembly of the handrail
- Devices for the connection of the exhaust-pipe
- Grill for the oven
- Baking-pan
- Baking-pan holder
- Glove box
- Protection for the fire door
- Instruction booklet for use and maintenance
- Green booklet and warranty certificate
- Quality certificate of the refractory bricks

2. INSTALLATION

2.1 GENERAL NOTES

Wood fired cookers and 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 device, move it keeping it lifted from the floor. The device must not be moved making effort on the handrail or on the handles.

2.2 SAFETY DISTANCES

Be sure that the cookers and the thermal cookers that have to be framed has the minimum safety distances to inflammable or high temperatures sensible materials (see paragraph 7.2). 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.

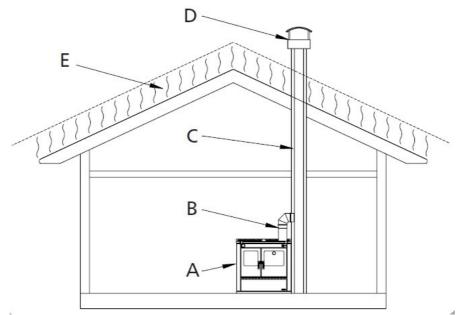
The device must be placed on a roof with enough load capacity. If the existing building does not satisfy this condition, you must adopt different solutions (for example you can use a plate to distribute the load). In case of floor made with inflammable material, it is necessary to use a fireproof protection 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 upon the device. 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 cookers or thermal cookers. During the installation, you must be sure not to obstruct the ventilation holes on the top: this to prevent the decadence of the isolating properties of the device and, in general, of its correct working.

2.3 CHIMNEY

Chimney has a main importance for a correct working. Wood fired cookers and thermal cookers are built to insure the maximum efficiency, anyway the performances of the 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 device. 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.

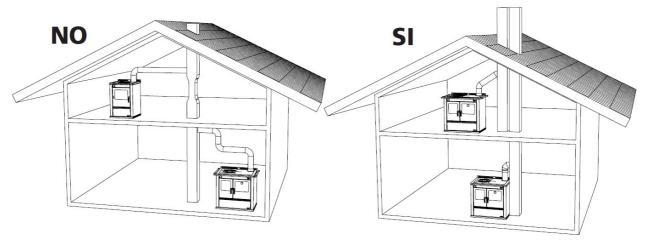


Picture 2 - Components of the chimney. A= cooker or thermal cooker, B= conjunction, C= flue, D= chimney, E= reflow zone

2.4 DIMENSIONS AND CORRECT FORMS OF CHIMNEY

Chimney must be dimensioned in a correct way according to the type of device 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 cooker or 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 of device 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 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 3 you can see some examples of good and bad chimney connection.

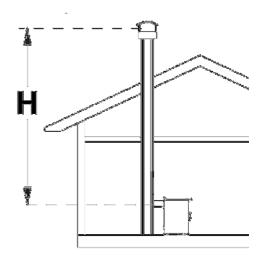




Picture 3 - Samples of correct and incorrect chimney connection.

Model	S	ST
ø entrance	130 mm	140 mm
ø flue H < 4 m	Draught not	Draught not
	guaranteed	guaranteed
ø flue 4 m < H < 6 m	160 mm	180 mm
ø flue H > 6 m	150 mm	160 mm
Necessary depression	12 Pa	12 Pa

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



Picture 4 - 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 OR FUME CONDUCT

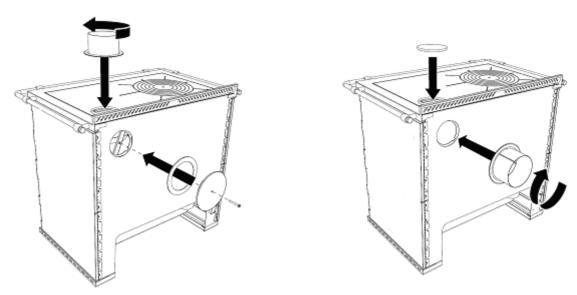
The conjunction of the device to the flue must be as short as possible and must not have horizontal or not much inclined parts. The counterslope parts are forbidden and must be absolutely avoided. Near the conjunction, inflammable materials must not be present. The conjunction must not go inside the 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 device and the conjunction must be fixed and sealed.

2.8 FLUE OUTLET PREDISPOSITION

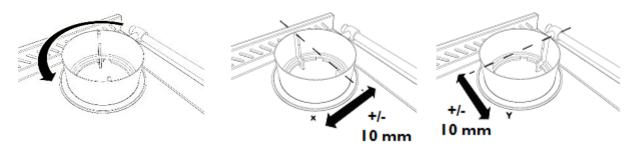
Wood fired cookers and thermal cookers are predisposed to have flue outlets in different positions (up, back, sides). Before connecting the device to the chimney you must be sure that all the outlets you will not use are well closed. Eventually, you can make modifications using the devices given together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



Picture 5 - Multiflue cooker/thermal cooker, predisposition of the correct flue outlet.

2.9 CORRECT CONJUNCTION TO THE CHIMNEY

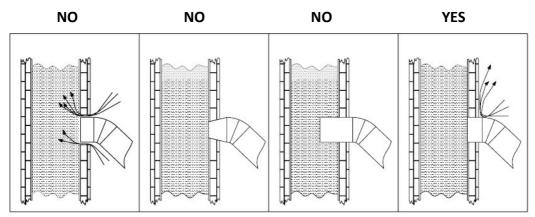
If the conduct of the chimney starts from a lower floor than the connection point of the device, it may be necessary to close the conduct under the connection pipe with fireproof materials. If you have the chimney behind or up, you have to use the connector with bayonet coupling. This must be inserted 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 6).



Picture 6 - Tolerance for flue outlet on the top and back. The tolerance depends on the orientation of the connector.



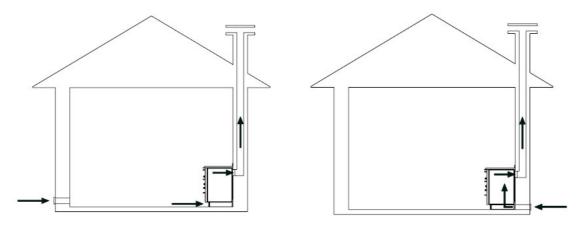
The connection with the chimney must be always well fixed and sealed, it must not have narrowing and must not decrease the usable section of the chimney (see picture 7). If near the cooker there is inflammable material or high temperatures sensible, the connection must be isolated and the safety distances must be strictly observed.



Picture 7 - Examples of correct and incorrect connection of the chimney.

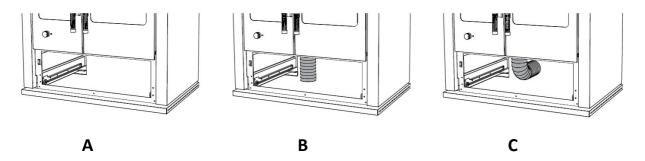
2.10 AIR INTAKE

The standard installation of the wood fired cooker and thermal cooker considers that the comburent air is taken from the room where the device is installed through the air intake of the device 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 vent-holes. 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 device in order to warrant a maximum depression of 4 Pa in the place of installation. The wood fired cookers and thermal cookers can also be connected so that the comburent air comes directly from outside. In this way, for the device 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 device. The air intake of the cooker is located inside the woodbox in correspondence of the combustion chamber. For the connection, we suggest to use a flexible pipe.



Picture 8 - Installation with air intake in the room of installation and installation with air intake directly connected to the wood fired cooker/thermal cooker.





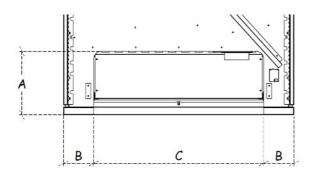
Picture 9 - Possible connections of the air intake of the cooker/thermal cooker.

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 device (see table 2 and picture 10). 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 subdimensioned.



Picture 10 - Rear sight of the plinth of the wood fired cooker or thermal cooker and specifies for the connection with the air intake.

Dimensions (in mm)				
Models	С	Ø		
S 80	248	118	564	95
S 90	248	118	664	95
ST 90	248	118	664	95

Table 2 - Dimensions for the connection of the external air intake.

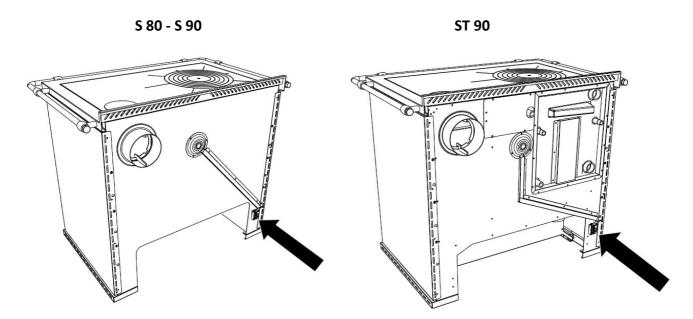


WARNING! For the correct working of the device verify that the passage of comburent air is not obstructed or, in case of connection with external air intake, that the air aspiration grill is not obstructed.

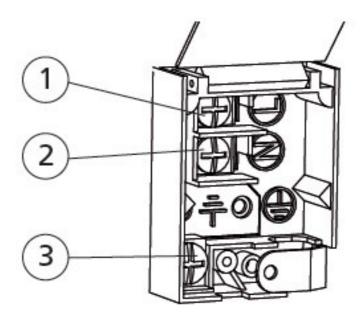
2.11 ELECTRIC CONNECTIONS

The electric connection of the cookers and thermal cookers allows the lighting of 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 cooker. Must be done the correct connections of line, neutral and earth as described in picture 11. 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 11 - Position of the terminal board for the connection to the network.

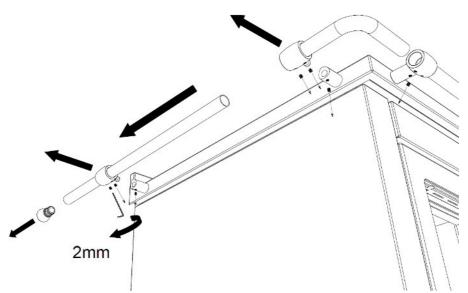


Picture 12 - Terminal board for the connection to the network: 1. Line 2. Neutral 3. Earth

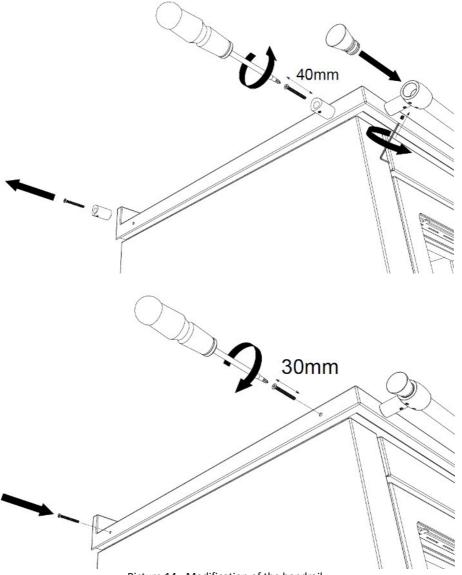
2.12 HANDRAIL PREDISPOSITION

S cookers and ST thermal cookers are endowed with handrail on three sides (front, left side, right side). In some situations it may be necessary to remove the handrail from one or more sides. To make this operation, you need a star screwdriver and the hex key with the screws given together with the device. First, you must remove the final part, which is just inserted by pressure. Then you have to release the hex head screws under the carrying of the handrail where necessary. Now you can extract the handrail bar from the carryings, then unthread the pommels of the carryings and the bend of the handrail. Now you must insert the final part where was inserted the bend before, then remove the carryings with the star screwdriver, replace the fixing screws with the screws given as endowment and finally close again the hex head screws released before.





Picture 13 - Modification of the handrail



Picture 14 - Modification of the handrail





WARNING! Do not lean inflammable objects on the handrail, like kitchen rags orpinches. Do not hang the linen to dry on the handrail.

2.13 FIRST LIGHTING

Before starting to use the 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. We suggest to make a first lighting of the device 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. During the first lightings some smell due to processing residuals might happen. This phenomenon is normal, it requires the ventilation of the room and will disappear quickly.

2.14 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 cooker or the thermal cookers a little condensation is being generated. All the refractory materials inside the cooker experience a settlement process that may generate small holes on the bricks, such holes do not preclude anyway the working of the cooker. Other settlements may involve other parts of the cooker so during the heating and cooling phases you might hear light noises. These symptoms do not absolutely preclude the use of the cooker and fading out till disappearance with the constant use of the cooker.



3 HEATING SYSTEM (ST 90)

3.1 GENERAL NOTES

ST 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. Usually the system shall be designed according to UNI 10412-2 law by a qualified thermal technician and installed by specialized staff according to the existing laws and the UNI 10683 law. The ST Range thermal cookers are endowed with all the necessary predispositions for a correct installation, every external component (as pumps, valves, acoustic alarms system, pressure switches, expansion tank) must be obtained by third parts according to the specifies of designer and installer.

3.2 CONNECTIONS TO THE HEATING SYSTEM

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).

3.3 AUXILIARY CONNECTIONS

According to the system you want to install, there are some auxiliary connectors for facultative use, but sometimes necessary. These are the connectors for the thermal discharge circuit, the connector for the detector of thermal discharge valve and the connector for the thermostat. If not used, these connectors must be covered.

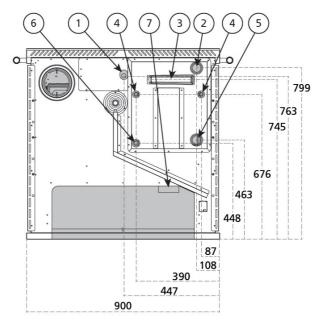
3.4 THERMOSTAT

ST thermal cookers are not endowed with thermostat. If you want to create a forced circulation based heating system it is necessary to use an external thermostat to control the working of the circulation pump of the system, according to the temperature of the water in the boiler. The thermostat must be placed external to the device with the temperature detector inserted in an suited cockpit in the rear part of the thermal cooker. The thermostat must guarantee the working of the pump each time the water temperature of the boiler exceeds 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.





Picture 15

- 1 Connection thermostat detector Ø 1/2" female
- 2 Going connection Ø 1"1/4 female
- 3 Connection for thermal discharge detector Ø 1/2" female
- 4 Connections for thermal discharge circuit Ø 1/2" male
- 5 Return connection Ø 1"1/4 female
- 6 Connection discharge Ø ½" female
- Z External air intake (optional)

3.5 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 important 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.

3.6 THERMAL DISCHARGE

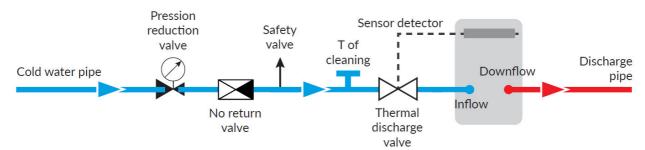
For more safety, it is possible to make an auxiliary circuit of thermal discharge connected directly to the boiler. The thermal discharge circuit is mandatory in case of closed expansion tank installation.

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 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



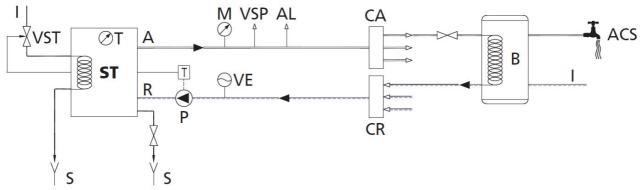
discharge circuit must not be used for the production of hot water for domestic use. On demand, Rizzoli can provide a thermal discharge valve suited for its devices.



Picture 16 – Thermal discharge circuit scheme.

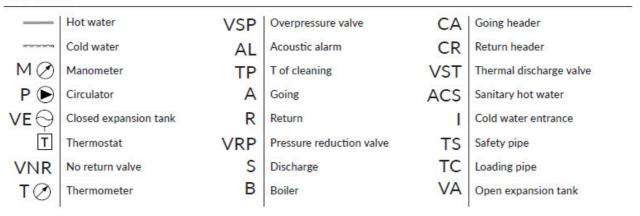
3.7 EXAMPLES

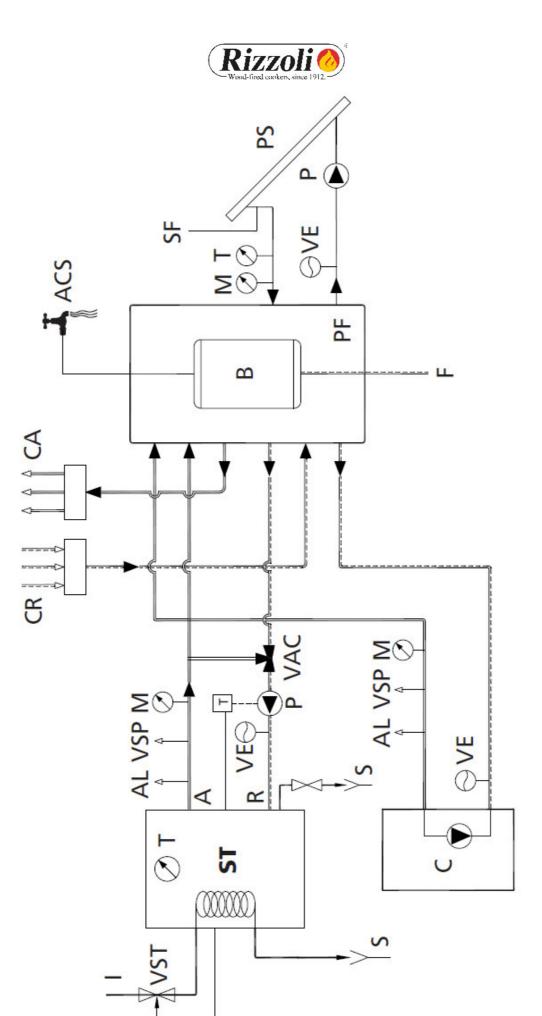
Here are some examples of possible system realization. These schemes are just valid as example and must not be used in the making of the system. Ask always a thermal technician for an installation that best suites your needs.



Picture 17 – Simplified schemes for the installing of a heating system with the thermal cooker ST 90 as heat generator.

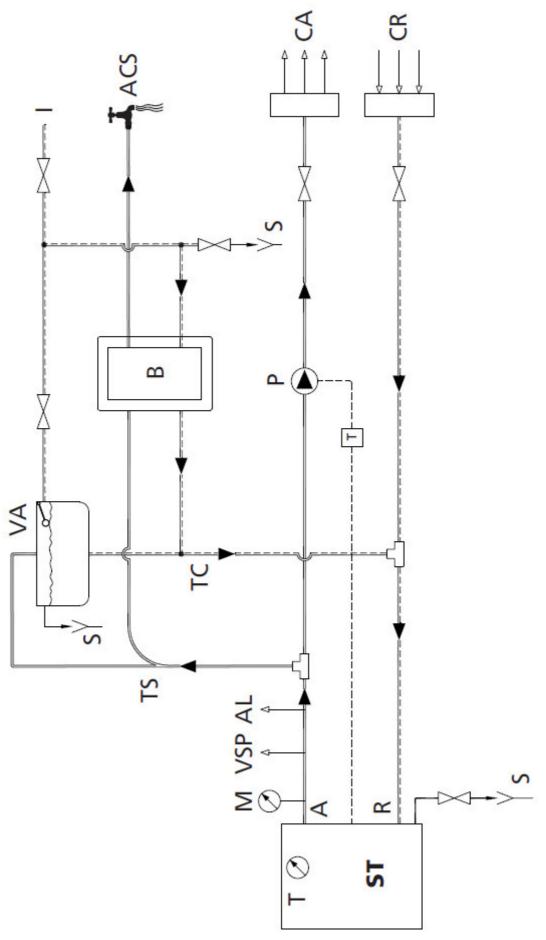
CAPTION





Picture 18 – Simplified schemes for the installing of a heating system with the thermal cooker ST 90 as heat generator.





Picture 19 – Simplified schemes for the installing of a heating system with the thermal cooker ST 90 as heat generator.



4. USE

4.1 OPERATION

During the operation, inside the cooker happens a combustive reaction of combustible (the wood inserted in the combustion chamber) and burning (the oxygen present in the air of the room in which the cooker is placed).

The wood fired 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 device.

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.

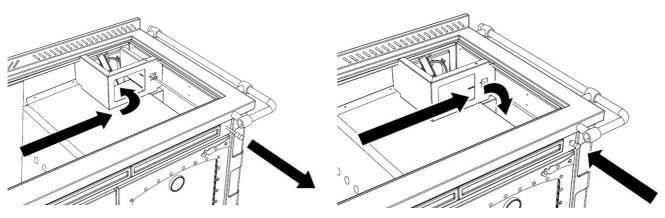


WARNING! For a correct operation verify that the eventual external air intake in the room and the air aspiration and ventilation grids are not obstructed.

4.2 STARTING

To allow an easier lighting of the cooker with cold chimney, wood fired cookers and 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 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 device. Both the cooker and the thermal cooker are designed to work with the key turned off, the use with the key opened does not allow the device to work at its best and may cause overheating and consequent damages.



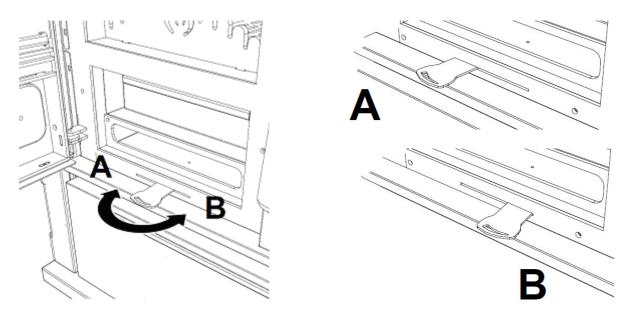


Picture 20 - Starting key. With lever outside, the key is open and the starting is easier; with lever inside the key is closed for the normal working.

4.3 AIR INTAKE REGULATION

On every model there are two air regulations: the lever of the external air intake and the draught regulator.

The entrance of comburent air inside the device is ruled by a valve controlled by a lever placed below the fire door. The valve is closed in the right position while it is open in the left position. For the regulation of this device see picture 21. If the device has the flue outlet on the left side, the regulation of the lever is symmetrical (valve closed in left position, open in right position).



Picture 21 - Air regulation fire door lever: the valve is open in correspondence of the position indicated with letter A while it is closed in correspondence of the position indicated with letter B.

The open position is indicated when the device is working. It allows the entrance of the combustive air necessary to feed the flame. The cooker or thermal cooker cannot work with the lever in closed position.

In presence of a hood with high draught it could be useful to set the lever at an intermediate position, in order to obtain a partial opening of the air conduct.

The primary air regulator, placed on the front part of the cooker, is ruled by a graduated hand gript that operates on the combustion speed. Low values guarantee less power and more



autonomy. High values guarantee more power and less autonomy. The regulator is automatic and has the task to keep steady the heat produced by the cooker.

When the device is not operating, we suggest to close the lever below the fire door 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 device 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 3.

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

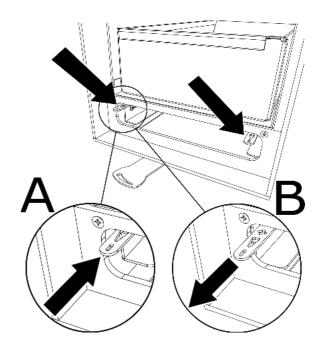
Table 3 – Settings of the wood fired cooker and thermal cooker according to their use.



WARNING! 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 SECONDARY AIR REGULATION (ST 90)

The secondary air is already set to work correctly in standard installation conditions. When inside the combustion chamber of thermal cooker ST range an excessive accumulation of embers happens or generally it is necessary a bigger quantity of primary air, it is possible to use the two addictive regulations located in the lower vain below the ash drawer, accessible opening the fire door (see picture 22). The position towards internal is factory set and it is the one of normal use. The extraction of the lever causes the closure of the secondary air inflow.

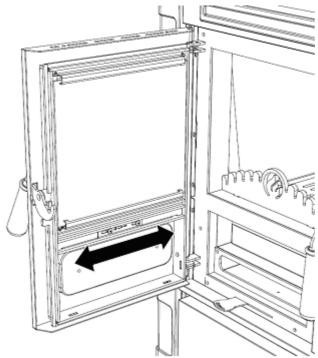


Picture 22 - Secondary air regulation. The regulation is open in correspondence of the position indicated by letter "A" (bigger inflow of secondary air than primary air) while it is closed in the position indicated with letter "B" (bigger inflow of primary air than secondary air).

4.5 GLASS CLEANING AIR REGULATION



On wood fired cookers and thermal cookers the glass cleaning air is fixed and set so that the combustion is optimal and the glass of the fire door is clean. When the device is installed on a chimney with high draught, it is possible to experience an excessive air inflow. In this situation it is necessary to restrict partially the air flow as indicated in picture 23, so that the excessive draught is compensated. This regulation shall be done, when necessary, only during the installation of the device. To make the regulation: open the fire door, release the screws, scroll the regulating plate and then fix the screws again. The regulating plate scrolls horizontally and opens or closes the air flow according to the indicated direction. Do not close completely the air flow because it may cause a not regular working of the cooker that could make dirty the glass of the fire door.



Picture 23 – Glass cleaning air regulation

4.6 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 device may experience damages without having no advantage for the cooking of foods.

4.7 OVEN COOKING

The internal temperature of the oven depends on the combustion speed and on the amount of combustible used. In particular, working on the lever of the air intake 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 the device, we suggest to increase the temperature with bright fire and then to decrease the speed combustion to keep the temperature steady. S and ST range models are endowed with fire door with glass and

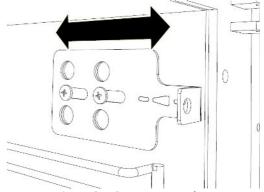


thermometer that makes easier the temperature controlling operations; the temperature indicated by the thermometer is approximate ad is useful only for the cooking of foods. If you want to brown the meals, you should keep them in the upper part of the oven: instead, if you want to cook in a steadier 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 cooker: an overheating can damage the 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 more or less 1 Kg 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.

4.8 STEAM EXCESS VALVE

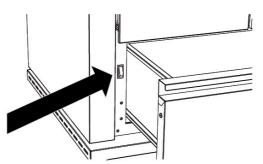
Cooking meals sometimes may generate a steam excess inside the oven. For this reason on models S and ST there is a valve that allow to eject the steam in excess. The valve is placed inside the oven on the lateral side towards external and when necessary it shall be regulated to open the air intakes.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



Picture 24 - Steam excess valve.

4.9 OVEN LIGHT

The presence of a light inside the oven, 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.

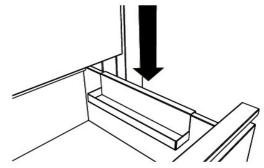


Picture 25 - Switch to light the oven.

4.10 GLOVE BOX



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.

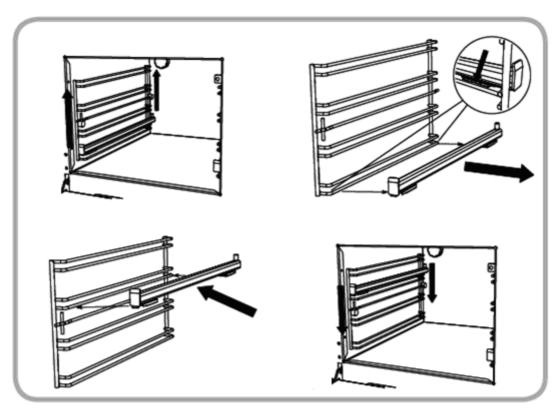


Picture 26 - Glove box fixed on the wood box.



WARNING! Do not insert material or inflammable devices inside the glove box.

4.11 TELESCOPIC PULLOUT FOR BAKING PAN



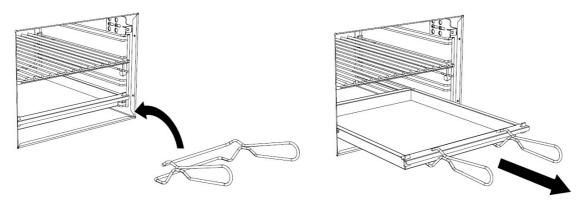
Picture 27 - Instructions for the variation of the position of the telescopic pullout.

All the devices 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. On the cookers and thermal cookers 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 27.

4.12 BAKING-PAN HOLDER



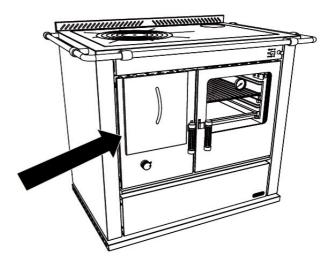
The baking-pan holder allows to extract the baking-pan in a safe way, with no need to use rags or hot pads. The baking-pan holder must be hooked to the baking-pan edge and used with two hands.



Picture 28 - Baking-pan holder.

4.13 FIRE DOOR PROTECTION (OPTIONAL)

The S and ST range wood fired cookers are endowed with 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 29 – Fire door protection.

4.14 PLATE COVER (OPTIONAL)

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



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

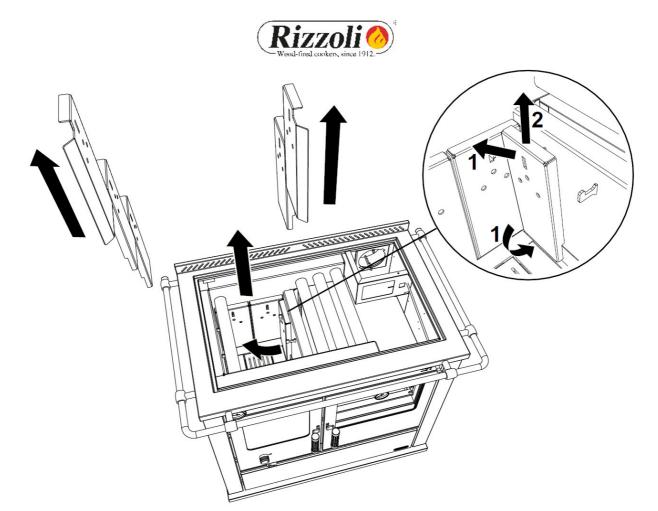
In particular situations, after the installation or with the cooking of meals, an oxidised superficial stratus may be generated, in particular on the inox stainless steel frame. Also in these situations, an accurate cleaning will restore the state of the product as it was new. On request Rizzoli gives specific products to clean stainless steel. For enamelled or painted parts, do not use abrasive or aggressive solution and in case of stains pour some oil and wait while it absorbs the halo, then clean with a soft rag. It is also recommended to avoid the use of solvents or denatured alcohol on painted parts.

5.3 MAINTENANCE OF THE COMBUSTION CHAMBER SHEETS (ST 90)

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.



Picture 30 – Maintenance of the combustion chamber sheets

5.4 GRILL CLEANING

Every time you use the cooker or 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 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.

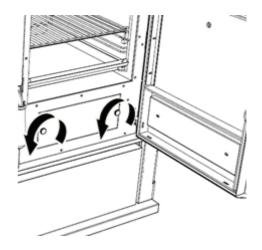
5.5 ASH BOX

Every time you use the device 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.



5.6 FUME-CIRCUIT INSPECTION

In the cookers and thermal cookers with oven the combustion fumes are forced to turn completely around the oven. For this reason, the devices 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 31 - Fume-circuit inspection.

5.7 OVEN CLEANING

Before cleaning it is recommended to remove both the baking pan and the grill. For an accurate cleaning, it is possible to remove also the lateral grills. The oven must be cleaned with products available in the commerce.

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 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 cooker or 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 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 internal part. To do this, it is necessary to remove the internal glass unscrewing the four Allen screws that block it.





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

5.10 WOODBOX EXTRACTION

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.

5.11 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 cooker or thermal cooker you have to remove all the pots and boilers that could maintain moisture on the plate. Together with the device are given some exclusive products, studied for the cleaning and the maintenance of the plate: the abrasive sponge, the plate cleaner and the oil for plate care. 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 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 with the plate cleaner given together with the device. If the rusty stain is not being cleaned, you could have to wipe the plate with the abrasive sponge or with a lightly abrasive paper. To restore the protecting layer wipe the plate with little oil for plate care. In any case, cleaning with water must be avoided.

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 wiping with oil for plate care.

When the cooker has not been used for a long time it is suggested to treat the plate with the oil for plate care, in this way the plate is protected against moisture in the best way. 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.

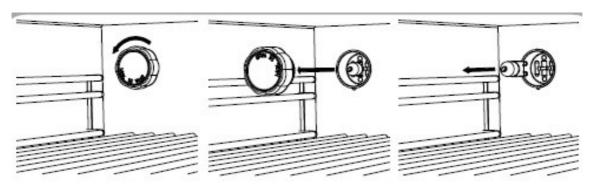
5.12 MAINTENANCE OF THE LIGHT



WARNING! Before starting any maintenance operation for the light, you must disconnect it from AC power and be sure that the cooker is not powered. Verify also if the 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°C 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 32 - Take-down the oven lamp.

5.13 HANDLES MAINTENANCE

When it is necessary to replace or to tighten the handles of the fire door or the oven door it is essential to follow the correct sequence of the conic washers, see picture 33.



Picture 33 – Correct position of the rounded washers.

5.14 THERMIC DILATATION

During the use all the materials of the device are subjected to dilatation and light moving due to the temperature variations. This phenomenon must not be prevented otherwise deformations and breakings may occur. For this reason, the spaces that allow the dilatation both internal and external of the cooker or thermal cooker must be kept free and clean.

5.15 EXTRAORDINARY MAINTENANCE

Most of the parts of the cookers and thermal cookers 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 serial number of the cooker indicated in the green booklet given together with the device. 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 device.	 Verify that the air regulations is at its 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 device 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 or thermal cooker
Bad working	Bad working due to bad weather.	Allow the flow of air in the room • Eventually, use a windproof chimney-pot
Fire	The chimney and other parts near the cooker or the thermal cooker take fire.	Close the air regulation of the cooker or thermal 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 the air regulation to its 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 device had the time to dry and to balance itself
Condensation in the combustion chamber (ST 90)	Condensation is created on the walls of the boiler.	• Verify that the circulation pump activation temperature is not below 55-60°C • In presence of big hot water tank it is suggested to install a valve or an anti-condensation system • Verify the correct position of the sheets in the combustion chamber
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
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	S 80	S 90	ST 90
Weight	190 kg	210 kg	220 kg
Nominal power	10,2 kW	10,2 kW	23,8 kW
Nominal power given to water			13,4 kW
Nominal power given to environment	10,2 kW	10,2 kW	10,5 kW
Efficiency	83,3 %	83,3 %	77,0 %
Emissions CO (13% O ₂)	0,04 %	0,04 %	0,52 %
Chimney vacuum	11 Pa	11 Pa	12 Pa
Exhaust gas temperature (*)	167,5 °C	167,5 °C	309,3 °C
Exhaust gas flow	12,4 g/s	12,4 g/s	17,2 g/s
Boiler capacity			12 litres
System pressure (max)			3 bar
Combustible consumption	2,8 kg/h	2,8 kg/h	7 kg/h
Max. combustible quantity	3,0 kg	3,0 kg	7 kg
Autonomy	1 h	1 h	1 h
Electric power	25 W	25 W	25 W
Tension	230 V	230 V	230 V
Frequency	50 Hz	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 SAFETY DISTANCES

Safety distances from inflammable or sensible to heat materials in absence of other isolating systems.				
Model	Laterally	Behind	From	On
S 80	25 cm	30 cm	80 cm	60 cm
S 90	25 cm	30 cm	80 cm	60 cm
ST 90	1 cm	1 cm	80 cm	70 cm

7.3 REGULATIONS AT NOMINAL POWER

Model	S 80	S 90	ST 90
Air intake lever	Open	Open	Slightly open
Draught regulator	Open (5/6)	Open (5/6)	Open (7/8)
Starting key	Closed	Closed	Closed



8. WARRANTY

8.1 DECLARATION OF PERFECTLY MADE PRODUCT

Rizzoli warrants that the device has passed all the quality controls and internal tests. Rizzoli also warrants that the device is working, without imperfections due to building or due to materials. This device is the result of the multi-decennial experience of Rizzoli, who warrants a perfectly made product.

8.2 GENERAL CLAUSES

Warranty lasts 2 years since the day of purchase. It is valid for the purchaser only, it is not transferable. To receive the warranty services the customer must provide a valid fiscal document of purchase (cash voucher, invoice etc.) and the enclosed warranty card. Keep them with care.

8.3 WARRANTY MODALITIES

Rizzoli reserves, in its unquestionable judgement, to choose the the action that best fits the problem object of warranty. The imperfect replaced parts remain property of Rizzoli. Rizzoli, in its unquestionable judgement, will decide if the warranty operations must be done in place or in its own factory. For operations made at home in the period of warranty, the customer must pay a fixed call fee in force. This fee must not be paid if the hood has been bought in the previous 3 months. For reparations made in Rizzoli Customer Service centres, transport charges are due.

8.4 IMPERFECTIONS OR DEFECTS IN THE MATERIALS

Imperfections or defects in the materials must be signalled within 8 days since the customer receives the products and anyway this implies only the obligation to replace what provided, excluding any additional responsibility.

8.5 PARTS NOT INCLUDED IN WARRANTY

This warranty does not cover the following, and the customer will be required to pay repair charge, even for defects occurring within the warranty period referred to above:

- Any defect that occurs due to mishandling.
- Any defect that occurs due to operations performed that are not mentioned in the sections of these instructions.
- Damages due to an excessive use of the cooker with consequent overheating of itself.
- Damages due to the connection of the hood to a wrong sized vent-hole pipe.
- Any defect that occurs due to the lack of application of the national and local laws.
- Any defect that occurs due to not perfectly made installations.
- Any defect that occurs due to repair, modification, cleaning, etc. performed by anyone other than Rizzoli authorized Customer Service centres.
- Consumer parts like bulbs, grills, gaskets, baking pans, glasses etc.



8.6 BOILER WARRANTY (ST 90)

The warranty for the boiler of the thermal cooker is 6 years since the date of purchase. The warranty covers eventual defects of the boiler itself. Are excluded from the warranty damages caused by a thermosanitary system connected to the thermal cooker not planned or duly made or the damages caused by a not proper use of the thermal cooker.

In particular, are excluded from the warranty the damages caused by:

- Circulation pump activation temperature set on the thermostat or on the control unit to a temperature lower than 55° C.
- Lack of anti-condensation valve in the system in presence of a heat accumulation system (boiler or puffer) or characterized by considerable thermal inertia.
- Lack of a safety system as described in chapter 3 and as stated by the existing technical laws.
- Water boiling in the boiler.
- Use of the thermal cooker with boiler empty or not connected to the system.
- Use of the thermal cooker without the sheets inside the combustion chamber.
- Excessive or not proper wood loading in the combustion chamber.
- Use of not adequate combustible (wood not dry, coal, other combustibles).
- Problems caused by rambling power generated by missed earthing of the system and the thermal cooker.
- Use of antifreeze inside the boiler.
- Use of calcareous water.
- Chimney not adequate, the chimney must meet the specifics indicated in chapter 2.

8.7 OPERATIONS MADE OUT OF THE WARRANTY PERIOD

Possible operations made out of the warranty period or in the cases in which warranty is not applicable, will be charged according to the pricelist in force. In this case will be also charged the price of the spare parts.

8.8 RESPONSIBILITY

Rizzoli is not responsible for incidental or consequential damages due to the lack of application of the national and local law and of the instructions written in this booklet.

8.9 COMPETENT LAW COURT

In case of controversy will be competent the law-court of Bolzano only.

NOTE

Rizzoli S.r.l. is constantly working to improve its products, for this reason the contents of this booklet may vary without notice.



DECLARATION OF PERFORMANCE

ACCORDING TO REGULATION (EU) 305/2011

N. 114

1. Unique identification code of the product-type : **ZV 90**

2. Type, batch or serial number (Art. 11-4) : \$80 - \$90 - L 90
Intended use or uses of the construction

3. product, in accordance with the applicable harmonised technical specification

Name or registered trademark of the

manufacturer (Art. 11-5)

5. Name and address of the manufacturer

6. System of assessment and verification of System 3

constancy of performance (Attachment 5)

7. Notified laboratory : I-33084 Cordenons (PN)

Via Amman, 41

Issued test report : 1880-CPR-029-14

8. **Declared performance**

Harmonized technical specification : EN 12815:2001/A1:2004/AC:2007

Essential characteristics Performance

Reaction to fire : A1

Minimum distances, in mm:

Cooker burning and domestic

heating solid fuel

: Rizzoli S.r.l.

Distance to combustible materials : rear = 300, sides = 250, floor = 0,

ceiling = 600, front = 800

Risk of burning fuel falling out : Pass

Emission of combustion products : CO [0,037 %]

Surface temperature : Pass **Electrical safety** : Pass Cleanability : Pass Maximum water operating pressure -- bar Flue gas temperature at nominal heat output : T [167 °C] Mechanical resistance : NPD Nominal heat output 10,2 kW Room heating output : 10,2 kW Water heating output -- kW : n [83,3 %] Energy efficiency

9. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 8.

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Trodena n.P.N., November 30th 2017

Zona Artigamaie: 1 - Juzzione Safu Lugano 1 - 39040 T R O DE N A (BZ) Tel. +39 0471 887551 Fax +39 0471 887552 P. IVA e C.F. 906 62 42 00 22 6



DECLARATION OF PERFORMANCE

ACCORDING TO REGULATION (EU) 305/2011

N. 63

1. Unique identification code of the product-type : ST 90

2. Type, batch or serial number (Art. 11-4) : ST 90 - STK Intended use or uses of the construction

3. product, in accordance with the applicable harmonised technical specification

Cooker burning and domestic heating solid fuel

4. Name or registered trademark of the manufacturer (Art. 11-5) : Rizzoli S.r.l.

5. Name and address of the manufacturer : ----

6. System of assessment and verification of constancy of performance (Attachment 5) : System 3

ACTECO s.r.l. - (N.B. 1880)

Notified laboratory

1.33084 Cordonous (PN)

7. Notified laboratory : I-33084 Cordenons (PN)
Via Amman, 41

Issued test report : 1880-CPR-022-15

8. **Declared performance**

9.

Harmonized technical specification : EN 12815:2001/A1:2004/AC:2007

Essential characteristics Performance

Reaction to fire : A1

Minimum distances, in mm:

Distance to combustible materials : rear = 10, sides = 10, floor = 0,

ceiling = 700, front = 800

Risk of burning fuel falling out : Pass

Emission of combustion products : CO [0,52 %]

Surface temperature : Pass **Electrical safety** : Pass Cleanability : Pass Maximum water operating pressure 3 bar Flue gas temperature at nominal heat output : T [309 °C] Mechanical resistance : NPD Nominal heat output 23,8 kW Room heating output : 10,5 kW Water heating output 13,4 kW

Energy efficiency : η [77,0 %] The performance of the product identified in points 1 and 2 is in conformity with the

This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Trodena n.P.N., June 12th 2015

declared performance in point 8.









Rizzoli s.r.l.

