



Oring

STOVE MODEL
SERIAL NUMBER
INSTALLATION DATE
REFERENCE SERVICE
PHONE NUMBER

INTRODUCTION	5
SAFETY INFORMATION	6
GENERAL INFORMATION	7
What are wood pellets	7
How is a stove made	8
Combustion	8
STOVE INSTALLATION	9
Advice for installation	9
Approved installations	9
System compatibility check	10
Air vent	10
Fume duct and fittings	10
Flue	10
Flue dataplate	11
Chimney cap (UNI 7129/08)	11
Testing and commissioning	13
Additional documentation and informations for the user	13
Maintenance frequency	13
Examples of installation of a pellet stove	17
Examples of installation of a pellet insert	19

TECHNICAL DATA SHEET	20
Minimum distance from flammable materials	20
PRELIMINARY OPERATIONS	21
Wiring	21
How to load the pellets	21
O-RING DESCRIPTION	21
HOW TO USE THE O-RING	22
OFF state	22
Switch on	22
Work phase	22
The grate	22
Turning off	22
First infeed screw loading	23
Extra fan blow	23
Installation and activation of external thermostat	24
Warning sign - hot fume	25
ALARMS	25
Alarm 1 - BLACKOUT	25
Alarm 2 - FUME TEMPERATURE PROBE	25
Alarm 3 - FUME OVERHEATING (HOT FUME)	26
Alarm 4 - FUME ENCODER FAULTY	26
Alarm 5 - FAILED SWITCH-ON	26
Alarm 6 - NO PELLETS (or pellets finished)	26
Alarm 7 - SAFETY THERMAL BREAKER OVERHEATING	26
Alarm 8 - NO DEPRESSURIZATION	27

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USER MANUAL
O-RING



ALARMS (REFERENCE TABLE)	27
MAINTENANCE	28
Cleaning should be provided by the user	28
Clean the surfaces	28
Grate cleaning should be carried out before each switch-on	28
Cleaning the ash pan	29
Cleaning glass	29
WARRANTY	30
Warranty Certificate	30
Warranty conditions	30
Info and problems	30
WIRING DIAGRAM	31

INTRODUCTION

Warning We recommend you carefully read this booklet, which describes all the necessary phases for perfect functioning of your stove.

Note: The standards relevant to the installation and functioning contained in this manual can differ based on local standards in force. In this case, always comply with the indications of the local competent authorities. The drawings in this manual are indicative, not to scale.

Information The packaging we have used offers good protection against any damage due to transport. In any case, check the stove immediately after delivery; in the event of possible visual damage, immediately inform your Ravelli srl dealer.

Description of the User and Maintenance Manual With this User and Maintenance Manual, the company Ravelli srl wishes to provide the user with all the information on safe use of the stove, to avoid damage to people or property or parts of the stove. **Please carefully read this manual before use and any intervention on the product.**

WARNINGS

Ravelli srl stoves are manufactured while paying particular attention to each component, to protect both the user and the installer from the danger of possible accidents. We recommend authorised staff pay particular attention to electrical connections after each intervention on the product. **Installation must be carried out by authorised staff, who must issue the customer with a declaration of conformity for the system, while taking full responsibility for final installation and the resulting good functioning of the product installed. It is necessary to keep in consideration all national, regional, provincial and municipal laws and standards for the country in which the equipment is installed. There is no liability on the part of Ravelli S.R.L. in the event of non-compliance with these precautions.** This user's manual forms an integral part of the product: ensure that it is always with the stove, also in the case of transfer to another owner or use or transfer to another location. In the event it is damaged or lost, ask technical support for a copy. This stove is intended exclusively for the use for which it was specifically manufactured. Do not use the equipment as an incinerator or in any other way other than for what it was intended. The manufacturer is excluded from any contractual or out of contract responsibility for damage caused to people, animals or property, errors during installation, regulation and maintenance and improper use. No other fuel other than pellets can be used. Do not use combustible liquids. Having removed the packaging, ensure the integrity and

completeness of the content. All the electrical components forming the stove should be replaced exclusively by an authorised technical support centre using original pieces. Stove maintenance must be carried out at least once a year and scheduled in advance with the technical support service. Do not carry out any unauthorised changes to the equipment.

For safety purposes, remember:

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. The children should be supervised to make sure they do not play with the device.
- contact with the stove is not recommended if you are in your bare feet or with parts of your body wet;
- it is forbidden to change the safety or regulation devices without the authorisation or without the instruction of Ravelli srl.
- it is prohibited appliance installation in small rooms, bedrooms, rooms with explosive atmospheres etc..
- we do not recommend loading pellets directly into the brazier before switching on the stove;
- the appliance works exclusively on wooden pellets; do not use the stove with other type of fuel.

The technician carrying out the installation must inform the user that:

1. In the event of water leakage, close the water supply and promptly inform the technical support service.
2. The operating pressure of the system must be periodically checked. In the event of non-use of the stove for a long period of time, intervention of the technical support service is recommended to carry out the following operations:
 - turn off taps on the heating and sanitary systems;
 - empty the heating and sanitary system if there is a risk of freezing.

When the stove is functioning, it can reach very hot to touch temperatures, especially on the external surfaces: operate with care to avoid burns. **The stove was designed to function in any climatic condition; in the event of particularly adverse conditions (wind, frost) the safety systems could intervene and switch off the stove.** If this occurs, urgently contact the technical support service and, in any case, do not disable the safety systems.

SAFETY INFORMATION

The stove must be installed and inspected by specialist staff trained by head office. Please carefully read this user and maintenance manual before installing and operating the stove. If you require further clarification, contact your nearest Ravelli srl dealer. The stove must be located indoors, never outdoors. Because it is controlled by an electronic board, it enables completely automatic and uncontrolled combustion: in fact, the control panel regulates activation, the 5 power levels and switch off phase, guaranteeing safe functioning.

Most of the hot ash falls into a pan via the basket used for pellet combustion. Check, on a daily basis, if the basket is clean, because not all pellets are of the highest quality and they can leave residues which are difficult to remove.

The glass is equipped with a special air wash for self-cleaning: yet, it is impossible to avoid a slight yellowish film on the glass after some hours of functioning. As already mentioned previously, the stove should be powered with pellets with diameter of 6 mm, but it can also operate with pellets with different diameter: in this case, contact your Ravelli dealer for technical advice.

NOTE

- Prepare the installation location of the stove according to local, national and European regulations.
- The stove must only be powered using high quality pellets with a diameter of 6 mm as described in the dedicated chapter.

The stove cannot burn traditional wood. It is forbidden to use the stove as an incinerator. DANGER OF FIRE!

- **Installation, electrical connection, verification of functioning and maintenance must be carried out by qualified and authorised staff.**
- **Improper installation or poor maintenance (non-conformity with what is reported in the following booklet) may cause damage to people or property. In this condition, RAVELLI SRL is released from all civil or criminal liability.**
- Before connecting the stove to electrical power, the connection of the discharge tubes (specifically for pellet stoves, not in aluminium) with the flue must be complete.
- The protection grid placed inside the pellet tank must never be removed.
- There must be a sufficient exchange of air in the room in which the stove is installed.

- Never open the door of the stove when functioning. **DANGER OF FIRE!**
- **It is forbidden to operate the stove with the door open or with the glass broken. DANGER OF FIRE!**
- When the stove is working, the surfaces, the glass, the handle and the tubes are very hot: during functioning these parts can only be touched using adequate protective equipment.
- **Do not switch on the stove without firstly carrying out a daily inspection as described in the MAINTENANCE chapter of this manual.**
- **Do not dry washing on the stove.**
Any washing lines or similar must be kept an appropriate distance from the stove. DANGER OF FIRE!
- Scrupulously follow the maintenance schedule.
- Do not switch off the stove by disconnecting the electrical mains.
- Do not clean the stove until the structure and ash are completely cold.
- Carry out all operations in a completely safe and calm manner.
- In the event of fire in the exhaust duct, switch off the stove immediately - DO NOT UNPLUG IT FROM THE MAINS - and call the **Fire Department** right away.

Responsibilities

By handing over to the end user this manual, Ravelli srl denies all liability, both civil and criminal, for accidents arising from non-compliance with instructions contained in it.

Ravelli srl denies all liability deriving from improper use of the stove, from incorrect use by the user, from unauthorised changes and/or repairs and from use of non-original spare parts.

The manufacturer declines all direct and indirect civil and criminal liability due to:

- poor maintenance
- non-compliance with the instructions contained in this manual
- use not complying with safety directives
- installation not complying with the standards in force in the country
- installation by unqualified and untrained staff
- changes and repairs unauthorised by the manufacturer
- use of non-original spare parts
- exceptional events

Spare parts

Exclusively use original spare parts. Do not wait for the components to deteriorate before replacing them.

Replace a worn component before it is completely broken to prevent any accidents due to sudden breakage of the components. Carry out periodic maintenance controls as described in the dedicated chapter.

GENERAL INFORMATION

The wood pellets are made from sawdust and wood shavings produced in joiners' shops. The material used cannot contain any foreign substance such as glue, varnish or synthetic substances.

Subjecting it to high pressure, the wood is pressed through a plate with holes and due to the high pressure the sawdust is heated activating the natural binders of the wood. Thus, the pellets keep their shape even without the addition of bonding substances.

The density of the wood pellet varies according to the type of wood and can be 1.5 - twice greater than that of natural wood. The diameter of the cylindrical rods is 6-10 mm and their length can vary between 10 and 50 mm.

Their weight is equal to about 650 kg/m³. Due to the low content of water (8-10%) they have a high energy content.

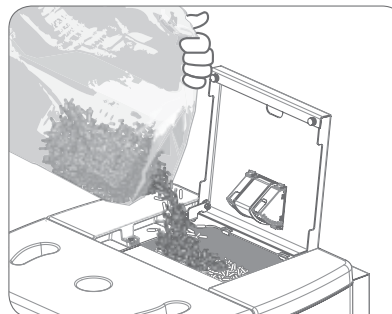
The standards DIN 51731 define the quality of the pellets

Length:	10 - 30 mm approx.	Residual humidity:	6 - 12% approx.
Diameter:	6 - 10 mm approx.	Ashes:	<1.5%
Real weight:	650 kg/m ³ approx.	Specific weight:	>1.0 kg/dm ³
Calorific power:	4.9 kWh/kg approx.		

The pellets must be transported and stored in a dry place. They swell on contact with damp, and cannot be used. They must always be protected from the damp both during transport and in storage.

Ravelli srl recommends a pellet with a diameter equal to 6 mm.

If you wish to use a pellet type with a different diameter contact the support centre to carry out the due regulations on the stove.

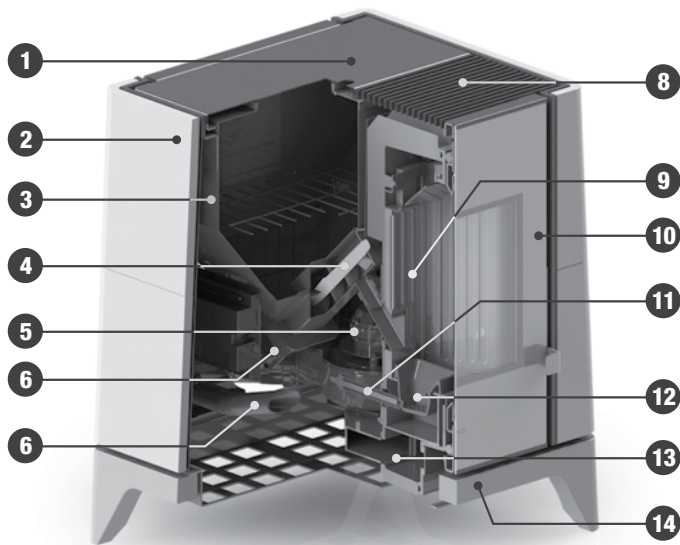


Do not put the bag of pellets on the ceramic parts during the loading operations.

Excerpt from the DIN PLUS standard

This standard requires that the pellet is produced with starting material "virgin wood" free of contaminants (glues, paints, preservatives). Manufacturing, however, allows the use of vegetable non-chemically modified thermal agglutinating agents such as wheat flour, rye or starch, which cannot however exceed 2% of the product. The pellets can be light or dark, usually packed in bags bearing the manufacturer's name, the main features and the marking of DIN Plus standard.

How is a stove made?



- | | | |
|-----------------------|-----------------------------------|----------------------|
| 1 Pellet tank cover | 7 Air intake duct with flow meter | 12 Cast iron brazier |
| 2 Design coating | 8 Hot air output grid | 13 Fume duct |
| 3 Pellet tank | 9 Vermiculite | 14 Stove base |
| 4 Pellet infeed screw | 10 Front door | |
| 5 Smoke extractor | 11 Ignition resistance | |
| 6 Pellet gear motor | | |

Combustion

Combustion is nothing more than a chemical reaction in which two agents, called the fuel and the oxidizing agent, combine to produce a new substance. A considerable amount of heat is also produced from this reaction (concept of pellet stove functioning).

To facilitate the aforementioned expression, we can take into consideration this practical diagram called the “combustion triangle”; it consists of three elements which are necessary to produce a combustion reaction. These three elements are:

fuel (pellets)

oxidizing agent (oxygen in air)

trigger (electrical resistor on switch on).

The fuel and the oxidizing agent must be in adequate proportions because combustion is restricted to the so-called “inflammability field”.

The reaction between the fuel and the oxidizing agent is not spontaneous, but occurs using an external trigger.

The trigger can be represented for example by a heat source or a spark. The trigger represents the ignition energy necessary for the reagent molecules to start the reaction and must be provided externally (electrical resistor on switch on). Then, the energy released by the reaction makes self-sustainment possible.

Three types of combustion are reported below, the correct one is reported in Figure 3:



INCORRECT combustion, flame too drawn, in “blow-torch” style with a high quantity of incandescent pellets coming out of the grate. Correct the pellet/air set by reducing the percentage of air (from 0 to -5); if not sufficient, also increase the percentage of falling pellets (from 0 to +5) to arrive to the condition in Figure 3. If the changes made to the settings do not bring the stove to the right combustion conditions in Figure 3, contact the Technical Support Centre.

INCORRECT combustion, “spring” flame in “wood stove” style with high quantity of pellets not burning on the grate. Firstly, check the door is closed and the ash pan. Secondly, correct the pellet/air set by increasing the percentage of air



fig.2

(from 0 to +5); if not sufficient, also reduce the percentage of falling pellets (from 0 to -5) to arrive to the condition in Figure 3.

If the changes made to the settings do not bring the stove to the right combustion conditions in Figure 3, contact the Technical Support Centre.



fig.3

CORRECT combustion, lively yellow/white flame with a minimum quantity of pellets on the grate. Ideal combustion which does not require changes.

Figure 3 shows a flame produced by a stove with functioning power set on the maximum value 5.

Safety devices

The stove is equipped with sophisticated safety systems, which avoid damage to the stove and/or the home in the event of breakage of a single piece or faults on the flue. In any case, if an anomaly occurs, the pellets are immediately stopped from falling and the switch off phase activates. The corresponding alarm is shown on the display. It is possible to see the details in the chapter dedicated to alarms.

Technical standards and Directives

All Ravelli srl products are manufactured according to the directives:

- 89/106 CEE construction materials
- 73/23 CEE electrical safety
- 2006/42/ CEE machines
- 2004/108 CEE electromagnetic compatibility

And according to the standards:

- EN 14785
- EN 60335.1 EN 50165
- EN 292 EN 294 EN 349

- EN 55014.1 EN 61000-3-2 EN 61000-3-3
- EN 55014.2

STOVE INSTALLATION

Advice for installation

Because of the frequent accidents caused by the malfunctioning of the flues in residential buildings, this chapter has been drafted in collaboration with Asso-cosma (association of stove/sweeping technicians and specialists of the field) in order to facilitate the installer to build a system able to evacuate fumes in accordance with the regulations in force.

- Marking standard Directive **CE 89/106** D.P.R. 246 regarding the exclusive use of CE certified material;
- **UNI 10683/2012** for the installation of a biomass fire box;
- **UNI/TS 11278** regarding the selection of material (only for pellet stoves different than V2);
- **UNI 10845 : 2000** (standard regarding gas use regulations) for piping and the relative check of skylight well (material used, wear condition, etc.) and safety distances to be observed from flammable materials;
- **UNI 10847 : 2000** Flue systems for individual generators powered by liquid and solid fuels Maintenance and Control Guidelines and Procedures;
- **UNI 7129/08** (standards regarding depressurized chimneys, excerpt from gas-related regulations) regarding the type, height and positioning of the chimney cap;
- **UNI/EN 1443** regarding the installation with the minimum essential chimney requirements met (followed by the compilation of fume dataplate to be affixed to the same).

Approved installations

Fireplaces, stoves and barbecues cannot be installed in areas in which are present and functioning equipment fueled by liquid and gas type A and type B (for classification see UNI 10642 and UNI 7129).

It is forbidden to install the stove in rooms used for cooking, if there are:

- collective type ventilation ducts;
 - blowers/vacuums connected to the outside and/or equipment that can depressurize the room. It is forbidden:
- to install the stove in rooms at risk of fire such as garages and garages, bed-

rooms (only watertight installation) or studios (unless installed in a hermetically sealed combustion chamber).

EXCERPT OF STANDARD UNI/EN 1443

System compatibility check

Compatibility check of the system should be carried out before any installation or commissioning intervention. The adjacent, side and rear walls and the supporting surface must be made of non-combustible and non sensitive to heat material. The stove can be installed next to flammable materials or materials sensitive to heat as long as the required safety conditions are met by interposing an insulating and non-flammable material; this operation is provided in the instructions supplied by the manufacturer.

When the installation instructions are not available, the installer will have to secure the appliance and shall be liable for its commissioning. Before installation you should check the position of the stove, flue or exhaust terminal devices to make sure the following are complied with:

- Installation restrictions.
- Legal distances.
- Limitations provided by local administrative regulations or specific provisions of the local bodies.
- Conventional limitations imposed by the residence regulations, easement or contracts.

After surveying the installation place, the installer should check the following:

- the type of appliance;
- the compatibility of the installation place with the appliance in terms of minimum installation volume indicated by the instructions of the manufacturer of the heat generator regarding the requirements of the fume exhaust system for the deactivation of the heat generator;
- the internal cross section of the fume duct, the composing materials, the evenness of the cross section, the absence of obstructions;
- height and length on vertical plane of the chimney;
- the existence and compliance of chimney terminal;
- the possibility to fit external air vents and the dimensions of existing vents.

The complete flue exhaust system must be supplied and installed in compli-

ance with the regulations issued by the standardization bodies and should be installed according to state-of-the-art standards.

Air vent

It is used to fuel the fire box and input air into the room; it should be fitted directly from the outside (not through other rooms, garage etc.; its cross section should be equal or 1/4 higher than chimney section by minimum 80 sq.cm for stoves and thermo-stoves (UNI1475) and 100 sq. cm for boilers (UNI303-5). Manufacturer's and designer's instructions should be however complied with at all times. Also check that the drilling position of the wall allows the intake of fresh air, making sure that no harmful exhausts fumes return into the room (radon gas, ect.).

Fume duct and fittings

For heat generating devices equipped with an electric fume exhaust fan you must follow the installation instructions of the manufacturer regarding the maximum length and number of bends of the exhaust ducts. In case the maximum values are not available, you should follow the provisions below:

- Horizontal sections should have a minimum slope of 3% upwards (45° bends are recommended).
- The length of the horizontal section should be minimum and its plan projection should not exceed 3 metres.
- The number of direction changes including the one required to use the T fitting and insert the chimney should not be higher than 3.
- This section should have constant diameter and equal at fire box outlet up to the fitting into the flue.
- It is forbidden to use flexible metal and cement fibre tubes and pressurization should be ensured at all times.

In any case, the fume ducts should be sealed and protected against combustion products or condensate as well as insulated if passing outside the installation room. It is not allowed to mount manually regulated draught devices onto appliances with forced draught.

Flue

- It should be made of suitable materials to ensure resistance to normal mechanical and chemical stress, and should be properly insulated to prevent condensate; therefore, it should be provided with thermal insulation (prod-

uct standard for flue UNI 1856 I1I2 and standard for materials used UNI/TS 11278).

- Be free of narrowing throughout its length;
- Be properly spaced by means of air gaps and insulated with non flammable materials.
- Maximum bends allowed are at 45°.
- the flue installed inside the house should be insulated and can be inserted into a chimney terminal as long as the piping standards are being complied with (UNI 10845).
- The fume duct should be connected to the chimney by means of a T fitting with a collection chamber fitted with inspection glass to check the combustion residues and condensate collection.

Flue dataplate:

Supplied with the chimney, it identifies:

- The manufacturer;
- The CE marking;
- designation of the product as per standard UNI 1856(xx)

There is also a part to be completed by the installer which certifies the suitability of the chimney to the product (stove) installed, installation standard EN 1443

NAME and BRAND MANUFACTURER

CE

XX

01234

CERTIFICATE CE: 01234-CPD-0999

Chimney System EN 1856/1-2 T400 N1 D v2 I50050 G(30)

SECTION RESERVED TO THE INSTALLER

1) DESIGNATION EN 1443 T400 N1 D 3 G(30)

2) DIAMETER 100 mm

3) DISTANCE FROM FLAMMABLE MATERIAL: 30 mm

4) INSTALLER (name/address) Mario Bianchi Via Rossi 24 Calcinato (BG)

5) DATE: 27/01/2014

WARNING: THIS LABEL SHOULD NOT BE REMOVED OR MODIFIED

Annotations:

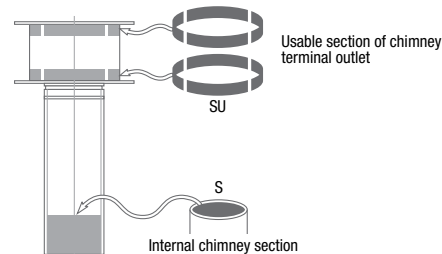
- Last two digits of the year in which the marking has been affixed
- Identification number
- Certificate number
- Designation stated by manufacturer
- Section compiled by the installer

LEGEND:

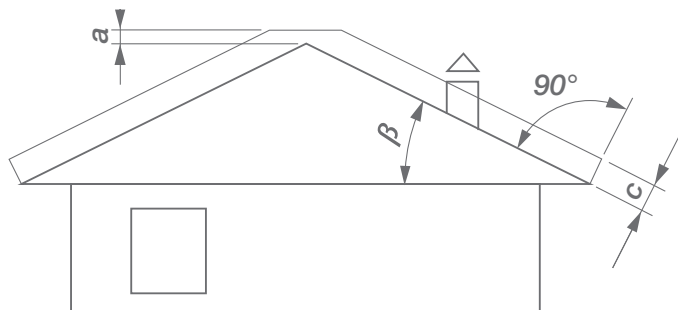
- T** Indicates the temperature class (T80 - T200 - etc.);
 - N/P/H** Indicates the protection class (N→negative - P→Positive - H→High pressure; “x”→ indicates the loss allowed whereas 1 is the most restrictive);
 - D/W** It indicates the condensate resistance class (D→for dry use - W→for wet use);
 - V** Corrosion resistance class (V1→gaseous fuels; V2→liquid fuels; V3→solid fuels; Vm→ test not performed);
 - LX/X** Indicates the type of material used and the thickness in hundredths of millimetres (i.g.: L50050 indicates L50→Stainless Steel AISI 316 and 050→thickness 0.5mm);
 - G/O** Indicates the fire resistance class of unburnt products (G→YES; O→NO) and the value between brackets indicates the distance from flammable materials.
- Therefore, the dataplate to be compiled following the requests for a pellet stove shall be: **Designation EN 1443: T400 N1 D 3 G(xx)**

Chimney cap (UNI 7129/08)

- Fume exhaust cross section should be twice the diameter of the chimney.
- Have a structure suitable to prevent water or snow from entering.
- Be built so that in the presence of wind it still ensures fume exhaust (wind-proof chimney cap).
- Function always as a static suction system facilitating fume dispersion.
- The release quota is measured between the lower covering layer and the lower point of the fume release into environment, outside the reflux area to prevent counter-pressures.
- Be built at safe distance from antennas or parabolic antennas never be used as a support;



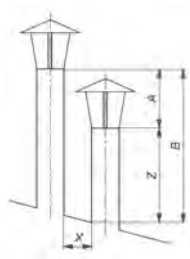
Safe distances for proper installation of chimney terminal:



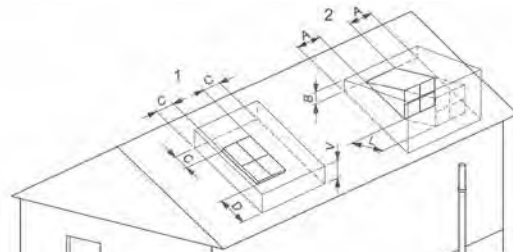
Symbol	Description	Clearance area [mm]
c	Distance measured at 90° from roof surface	1300
a	Height above roof ridge	500

La Release quota deve trovarsi al di fuori della zona di reflusso calcolata secondo il diagramma e la tabella sopra riportate. In prossimità del colmo, si considera la minore tra le due.

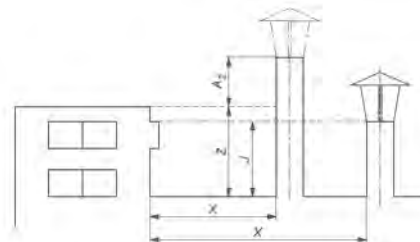
The flue system of the pellet stoves operate with **negative pressure** (see LH of the roof) the part marked with gray is the reflue area and the chimney terminal should therefore release the fume above these area.



Symbol	Description [mm]	Release area [mm]
Z	Height measured in vertical plane	(See figure 8)
B	$X \leq 500$	$Z + A$
A	Height above the obstacle	200



Symbol	Description	Clearance area [mm]	
Dormer window(2)	A	Side distance from dormer window	1500
	B	Height above the ridge of dormer window frame	1000
	L	Front distance from dormer window	3000
Skylight (1)	C	Distance from top or side line of openings or windows	1000
	D	Distance from the smaller line of openings or windows	3000
	V	Height above openings or windows	1000



Distance [mm]	Release quota	Distance [mm]	Release quota
$X \leq 2\ 000$	$Z + A_2$	$X \leq 3\ 000$	$Z + A_2$
$X > 2\ 000$	B	$X > 3\ 000$	B
The symbol Z marks the height (mm) of the obstacle or thermal compartment; for quotas A_2 and B see table 10.			

Distances depending on the distance of the terminal from the obstruction without openings (roof with slope $\beta \leq 10^\circ$ (17,6%).

Symbol	Description	Distanze da rispettare [mm]
A_2	Height above the virtual stratum between the building roof or obstacles or adjacent thermal compartments in the absence of openings/windows	500
B^J	Height above flat roofs or close parapets	1000

^{*)}If the terrace or flat roof is walkable, the clearance distances should be observed as specified in table 8.

Distance [mm]	Release quota
$X \leq 5\,000$	$Z + A_2$
$5\,000 > X \leq 10\,000$	J

The symbol Z marks the height (mm) of the obstacle or thermal compartment; for quotas A_2 and J see table 13.

Symbol	Description	Distanze da rispettare [mm]
A_2	Height above the virtual stratum between the building roof or obstacles or adjacent thermal compartments in the absence of openings/windows	1000

Release quotas depend on the distance of chimney terminal free of openings.



IT IS FORBIDDEN TO DISCHARGE FLUES THROUGH A DIRECT SYSTEM OR ANY OTHER DRAIN SYSTEM NOT PROVIDED BY THE STANDARDS MENTIONED ABOVE

Testing and commissioning

Stove commissioning must be preceded by a test that involves the verification of the operation of the following elements:

- the suitability of the fumes exhaust system;
- connection to external air vents, if any;
- electric and hydraulic connections;
- check that all the materials that make up the smoke duct, flue, chimney terminal are suitable for use and compliant with standards (fume exhaust of a stove with solid fuel).

For heat generating devices powered by mechanical systems testing must be done according to manufacturer's instructions.

The test is considered successful when all operation phases are completed without encountering anomalies.

Additional documentation and informations for the user

Upon installation completion, the installer should hand over to the user:

- the user's manual of the appliance supplied by the manufacturer;
- the technical documentation of the accessories used and subject to maintenance;
- the documentation of the flue exhaust system;
- the system booklet (where applicable);
- the documentation that certifies installation completion;

The documentation required to cover installer's liability comprises:

- detailed description (including photos) of other heat generators present;
- declaration of conformity of the state-of-the-art system (D.M. 37/08);
- description of overall dimensions, layout or photos regarding the modifications brought to the layout in case it was necessary to intervene during installation;
- The use of certified material with CE marking (89/106 D.P.R. 246);
- any information regarding the warranty;
- the date and signature of installer;

Maintenance frequency

Maintenance should be carried out periodically, as shown in the table below, and in the manner prescribed by standards and performed by qualified personnel; upon completion a regular intervention report should be issued. **The installer should ask for the receipt of delivered documentation and preserve it together with the technical documentation regarding the installation performed.**

Type of appliance installed	< 15kW	(15 - 35) kW
Pellet appliance	2 years	1 year
Appliances with air open firebox	4 years	4 years
Appliances with air close firebox	2 years	2 years
Water appliances	1 year	1 year
(fireplaces, thermo-stoves, thermo-cookers)	1 year	1 year
Boilers	1 year	1 year
Fume exhaust system	4t of fuel used	4t of fuel used

DECLARATION OF CONFORMITY OF THE STATE-OF-THE-ART SYSTEM

As per para.I of Art. 7 of Ministerial Decree 37 of January 22, 2008 no. 20

The undersigned _____

owner or legal representative of the company _____

operating in the handcraft sector with premises in _____

municipality _____ prov. (____)

phone _____ VAT no _____

registered in the Registry of Companies (DPR 7/12/95 no.581 of CCIAA of TV no. xxx

registered in the Provincial Handicraft Enterprises (L. 8.8.1985, no.443) of TV no. xx

system executed by (schematical description, project layout):

intended as:

new system makeover upgrade

non-routine maintenance other⁽¹⁾ _____

Commissioned by _____

installed at the premises in the municipality of _____ prov. (____)

street _____ floor _____ internal,

(name, surname or name of the company and address)

owned by _____

in the building designated as: industrial civil trade

other uses

DECLARES

under its sole responsibility that the machine was built in compliance with state-

of-the-art standards in accordance with the provisions of Article 6, taking into

account the operating conditions and the designated uses of the building, having in

particular:

observed the project drafted as per Art.5 by⁽²⁾ _____

followed the technical standard specific to its use as⁽³⁾ UNI10683/2012 UNI10845

UNI/TS11278 UNI/EN1443 UNI7129/08

- installed parts and materials suitable for the place of installation (Art.5 and 6)
- inspected the system for safety purposes and the functionality with positive outcome, having carried out the checks required by the standards and the provisions of the law.

Mandatory annexes:

- designed according to articles 5 or 7⁽⁴⁾
- report of the types of materials used⁽⁵⁾
- layout of the installation made⁽⁶⁾
- reference to previous or partial declarations of conformity, already existing⁽⁷⁾:
executed by the company _____ date _____
- copy of the certificate of acknowledgement of technical and professional requirements
- certificate of conformity for the system executed with non-standard materials or systems⁽⁸⁾.

Optional annexes: Photographic Documentation. Use and maintenance manual of the fireplace, the Fume dataplate and booklet of the generator, declaration of insulation compliance, combustion analysis, draught test, local ventilation and CO

verification and chimney seal test

DECLINE

all liability for injuries or damages to property arising from tampering with the system, by third party or due to lack of maintenance or repair⁽⁹⁾ .

Date _____

The technical manager _____

The undersigned _____

WARNINGS FOR THE BUYER: liability of the buyer or the owner, art.8⁽¹⁰⁾

The undersigned _____

buyer of the works/owner of the building declares to have received _____
copies of this document and the specified annexes.

Date _____

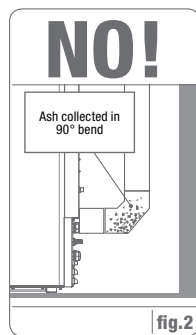
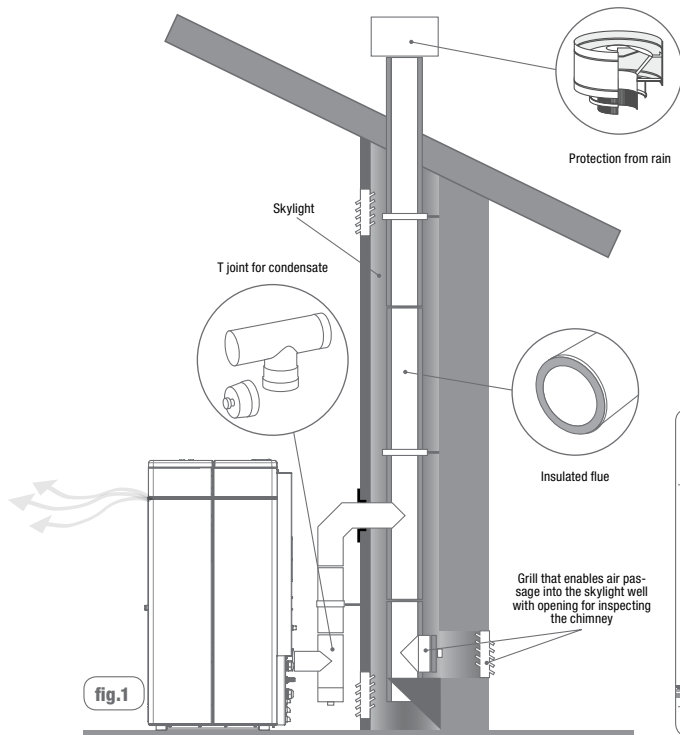
Signature _____

Reference key of system declaration of conformity

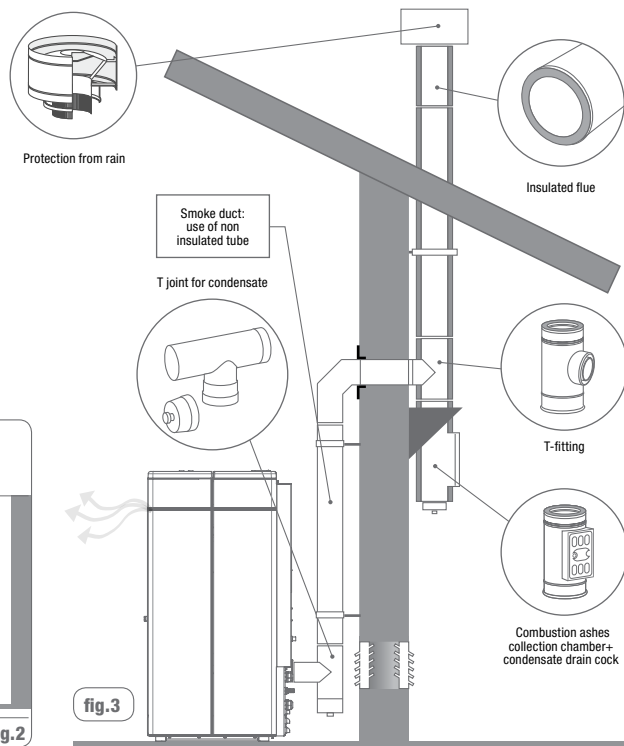
1. Like in the case of gas plants, by "other" we may mean the replacement of a device installed in a fixed manner.
2. Indicate: name, surname, qualification and (when there is an obligation as per Art.5, paragraph 2) registration data to the relative Professional association of the technician that drafted the project.
3. Specify the technical standards and regulations in force, classifying them per design, execution and inspection.
4. Should the system executed according to the design be modified during work, the project submitted at the end of the works should include the versions made. The project also includes the fire prevention protocol (where applicable).
5. For products subject to standards, the report should contain a complete statement of compliance to the same, where applicable, with reference to marking, test certificates etc. issued by authorized bodies. For the other products (to be listed) the signatory should declare that it regards materials, products and parts compliant with the provisions of Articles 5 and 6. The report should state the compliance with installation area. When this is relevant for the proper operation of the system, indications on the number or features of appliances installed or about to be installed should be provided (e.g. for gas: 1) number, type and power of appliances; 2) features of the parts that make up the ventilation systems of the area; 3) features of the system that feeds the fuels; 4) information on appliance wiring, where applicable).
6. The layout of the system executed includes the description of the works done (with simple reference to the project when the latter was drawn up by an authorized professional and variations during works have not been approved). In the case of: modification, enlargement and non-routine maintenance, the intervention should be integrated, if possible, into the layout of the existing system. The layout shall include the fire prevention protocol (where applicable).
7. The reference data include the name of the company that carried out the works and the date of the statement. For plants or parts of plants built before the entry into force of this decree, the reference to declarations of conformity may be replaced by a reference to declarations of conformity (Article 7, paragraph 6). If part of the system is executed by another company (such as ventilation and fume exhaust in gas installations), the declaration should include reference data for the said parts.
8. If the installation includes products or systems legitimately used for the same job in another Member State of the European Union or party to the Agreement on the European Economic Area, for which there are no technical standards for the product and installation, the declaration of conformity should be annexed to the project drafted and signed by a registered professional engineer in accordance with the specific technical skills required, certifying that the risk assessment associated with the use of the product or production system was performed, and the fact that he had adopted all necessary measures to achieve levels of safety equivalent to those guaranteed for the installations carried out, according to state-of-the-art standards and to have supervised the proper execution of the installation in all its phases in compliance with all technical standards provided by the manufacturer of the system or the product.
9. Example: any certificates containing the outcome of the checks performed on the system before commissioning or cleaning, sanitizing treatments etc..
10. Upon completion of works, the company that installed the system should issue the client a declaration of conformity of the systems in compliance with the standards in Art.7. The client or the owner should entrust installation, modification, enlargement and maintenance tasks of the system in Art. 1 exclusively to authorized companies as per Art. 3.

Examples of installation of a pellet stove

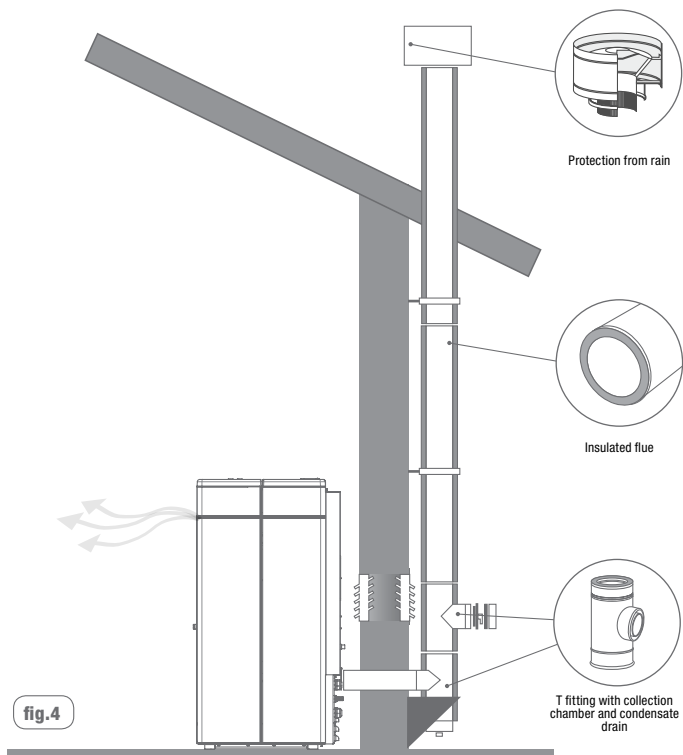
This type of installation (See fig.1) requires the chimney to be insulated despite the fact that the entire duct is installed inside the building. Moreover, the structure should be inserted into a properly ventilated skylight well. At the bottom of the chimney is provided an inspection cover suitably isolated from wind and rain. It is not recommended to install a 90° curve as the first initial piece, since the ash could quickly obstruct the smoke passage, causing problems for stove suction. (See fig. 2)



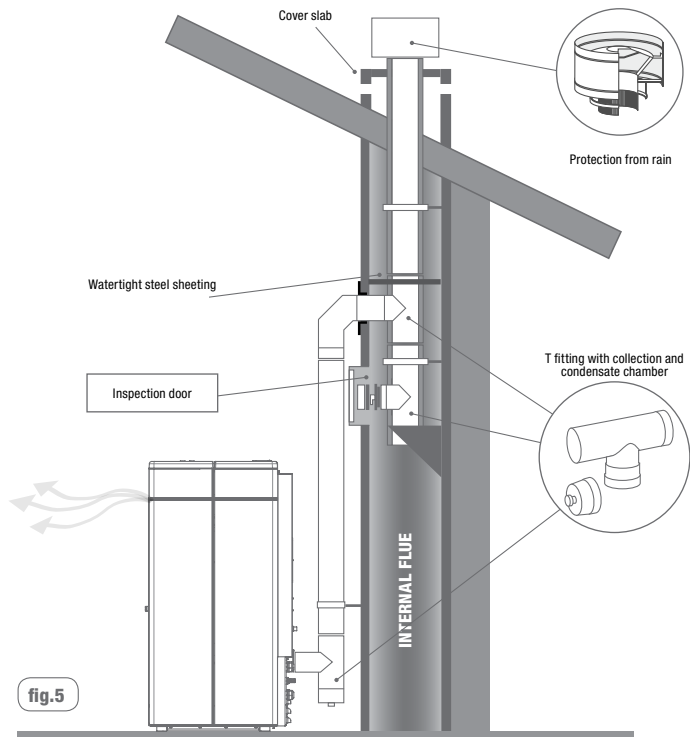
This type of installation (See fig. 3) does not need an insulated flue for the section inside the home, while the section placed outside must have insulated tubing. In the lower part of the flue, inside the house, was installed a T fitting with an inspection cap; another one was mounted outside to enable inspection of the external section. It is not recommended to install two 90° curves since the ash could quickly obstruct smoke passage, compromising stove's draught. (See fig. 2)



This type of installation (see **fig. 4**) requires insulated chimney since the entire smoke duct was assembled inside the house. The lower part of the flue has an assembled “T” joint with an inspection plug. It is not recommended to install a 90° curve as the first initial piece, since the ash could quickly obstruct the smoke passage, causing problems for stove suction. (See **fig. 2**)

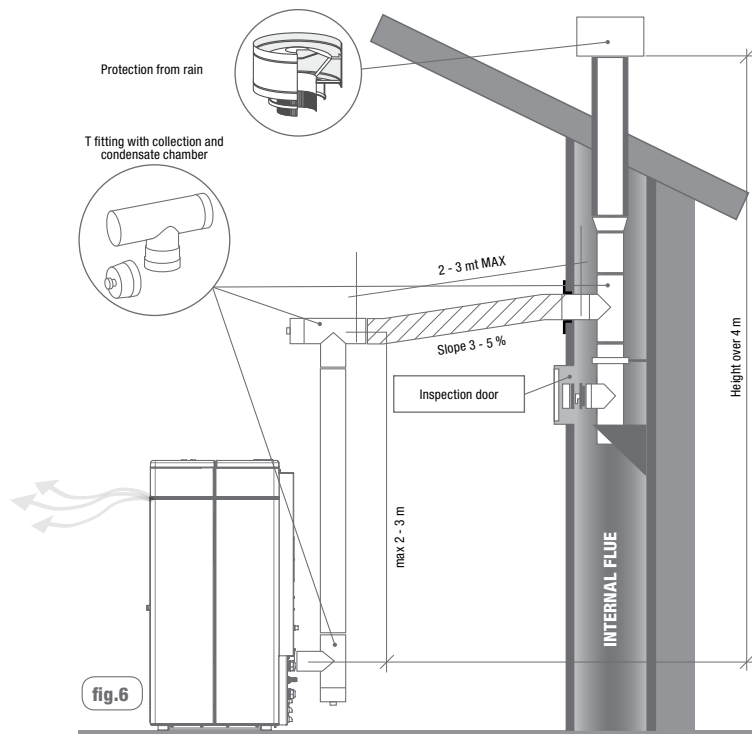


This type of installation (See **fig. 5**) does not require an insulated flue duct because the latter is installed inside the building and a part of it is located inside an already existing flue duct. In the lower part of the stove was installed a T fitting with inspection plug, like for the inner part of the flue. It is not recommended to install a 90° curve as the first piece, since the ash could quickly obstruct the smoke passage, compromising stove draught. (See **fig. 2**)



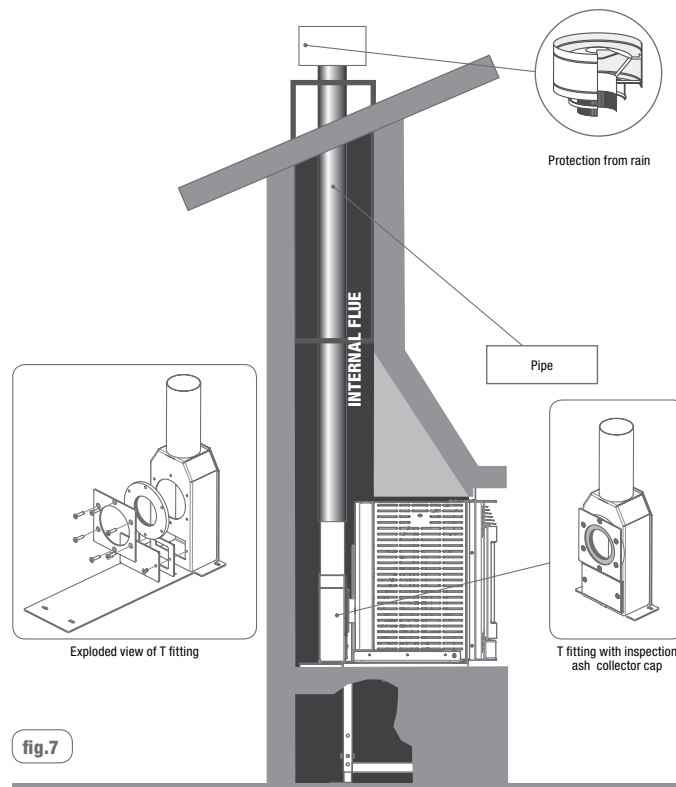
This type of installation (see fig. 6) requires a horizontal section for connection to an existing flue. Comply with the slope indicated in the figure, to reduce depositing ash in the horizontal tube section. In the lower part of the flue duct was installed a T fitting with inspection plug like for the flue inlet.

It is not recommended to install a 90° curve as the first piece, since the ash could quickly obstruct the smoke passage, compromising stove draught. (See fig.2)



Examples of installation of a pellet insert

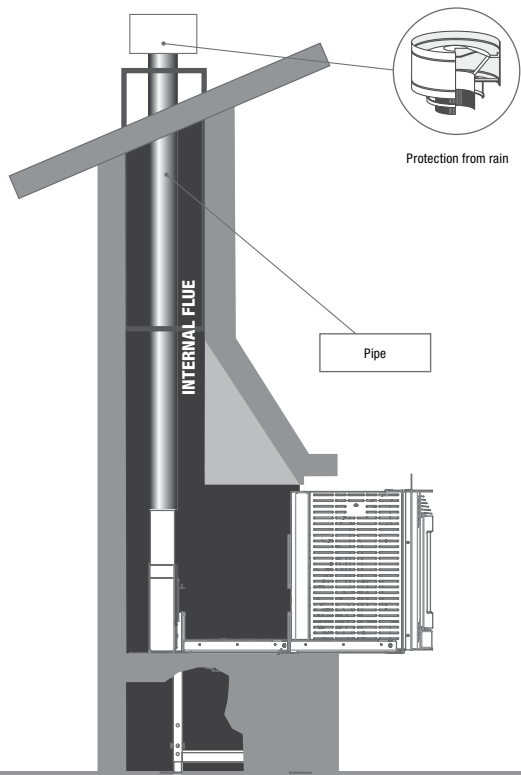
In this type of installation we can notice that the fitting was used to enable connecting the insert to the chimney (so-called “bayonet” mount). For safety reasons and to ensure proper operation, we recommend you fit pipes into the chimney. (Fig. 7). It is recommended to perfectly match the insert with the fitting, to prevent leaks of smoke during the work phase.



Here you can see the possibility to slide the insert; this operation can only be performed with the stove turned off for loading pellets or during regular checks. (Fig. 8)



IT IS STRICTLY FORBIDDEN TO REMOVE THE STOVE DURING THE WORK PHASES; THE FUME MAY DISPERSE INTO THE ENVIRONMENT.



TECHNICAL DATA SHEET

Minimum distance from flammable materials

Young 60

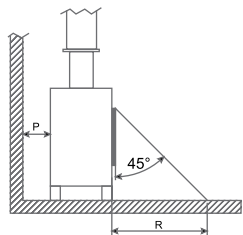
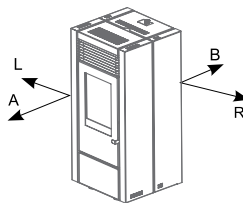
R = right side 150 mm
L = left side 150 mm
B = rearward 100 mm
A = front 800 mm

Young 60

R = right side 150 mm
L = left side 150 mm
B = rearward 100 mm
A = front 1000 mm

Young 80

R = right side 150 mm
L = left side 150 mm
B = rearward 100 mm
A = front 800 mm



		Young 60	Young 80	Young 110
Height	mm	960	1000	1050
Width	mm	455	475	517
Depth	mm	450	448,5	500
Weight	kg	85	90	130
Diameter of smoke exit tube	mm	80	80	80
Max. volume of heating	m ³	150	200	260
Thermal power	kW	$\frac{2.9}{5.5}$	$\frac{2.9}{6.9}$	$\frac{3.2}{9.9}$
Electrical power absorbed during operation	W	280	280	280
Supply	V Hz	$\frac{230}{50}$	$\frac{230}{50}$	$\frac{230}{50}$
Tank capacity	kg	15	17	19
Autonomy	h	$\frac{12}{23}$	$\frac{10.3}{24.2}$	$\frac{8.1}{27.1}$
Efficiency	%	$\frac{89}{90.5}$	$\frac{89}{86.6}$	$\frac{93.4}{88.2}$
CO at 13%O ₂	%	$\frac{0.017}{0.019}$	$\frac{0.047}{0.011}$	$\frac{0.0234}{0.010}$
Smoke mass	g/s	$\frac{3.3}{7.4}$	$\frac{3.7}{6.1}$	$\frac{3.6}{7.3}$
Minimum draught	mbar Pa	$\frac{0.1}{10}$	$\frac{0.1}{10}$	$\frac{0.1}{10}$
Smoke temperature	°C	$\frac{68}{161}$	$\frac{114.8}{188.8}$	$\frac{85.1}{196.3}$
Hourly consumption of pellets	kg/h	$\frac{0.5}{1.2}$	$\frac{0.7}{1.65}$	$\frac{0.7}{2.33}$

The data shown above are indicative and not binding. Ravelli reserves the right to make any modifications for the purpose of improving the performances of the product.

PRELIMINARY OPERATIONS

Wiring



Connect the power cord to the back of the stove and then to a wall socket.

The I/O switch in the figure should be set to I to power the stove. If voltage is not supplied check the state of the fuse installed in the box below the switch (4A fuse). During the periods of inactivity, we recommend you disconnect the power cord of the stove.

What to check before turning on the stove

Make sure you have removed all parts that pose the risk of burns from the combustion chamber or glass (various instructions or stickers). Before turning on the stove, make sure you have fitted the grate on the support base and check that the door and the ash drawer are properly close.

How to load the pellets



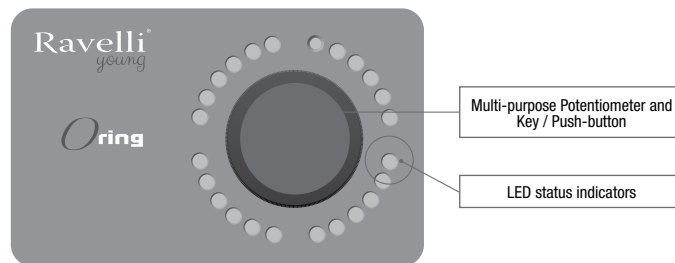
Fuel supply consists in the insertion of pellets from the top of the stove, by opening the door. During pellet loading prevent the pellet bag from coming into contact with hot surfaces.



NEVER INSERT INTO THE TANK OTHER KIND OF FUEL OTHER FROM THE PELLETS COMPLYING WITH THE SPECIFICATIONS BELOW

O-RING DESCRIPTION

The O-ring device is shown in the picture below:



The O-Ring graphical representation is minimal, to better highlight its main feature: simplicity. In the following pages we shall see how to use the device to control the Ravelli Young pellet stove. The O-Ring interacts with the user by means of 4 sets of 6 LEDs each. The latter propose animations in intense BLUE or RED light, depending on the phase or the situation.

Thanks to its simplicity, the O-Ring enables:

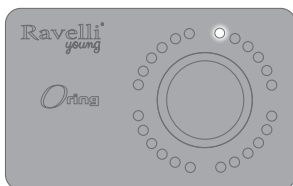
1. signalling the OFF state;
2. by holding it pressed down for 4/5 seconds, it switches the stove ON and OFF;
3. it INCREASES or DECREASES the intensity of the heat output by the stove, using 12 powers;
4. it enables a fine-tuning of room fan on each of the 12 powers;
5. it signals the user all OPERATION and ALARM states;
6. It does not provide date and time setting, thermostat setting- absent function - nor room temperature setting. The temperature will be adjusted by the user by increasing or decreasing the power, depending on the heat or cold sensation perceived inside the home or at the place of use.

CONVENTION FOR THE PICTURES IN THIS MANUAL: The pictures of the O-Ring are reproduced in cartoon-type pictures for easy printing. The lamps and the different colors are represented with arrows and various indicators for easy understanding.

HOW TO USE THE O-RING

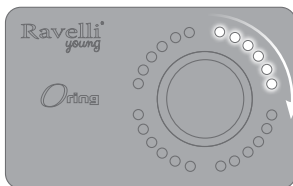
OFF state

Once you have checked that the I/O switch on the back of the stove is set to OFF and you have connected the power cord to the stove and the socket equipped with a protective earthing system, bring the switch to I. The O-Ring will display a BLUE blinking light through the first LED on top right, as shown in the figure:



Switch on

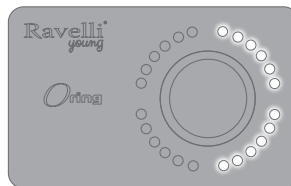
Press and hold the middle push-button/potentiometer until the LEDs, in groups of 6, start rotating clockwise. Release the push-button and wait for the stove to start working. The animation will be executed throughout the switch-on phases: initial loading, ignition and stabilization. Once the stove switches to WORK status, the LEDs will be displayed differently.



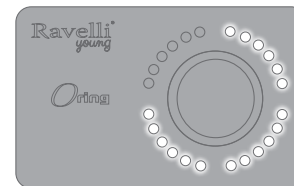
Work phase

Once the initial phase has been completed successfully, LED movement stops and the display will indicate the operating power selected when the stove was turned off the last time. Turn the knob clockwise to increase the power and the heat output by the stove - turn it counter-clockwise to decrease the power and speed of the fan. Please note that the O-Ring features

12 powers, each of them being indicated by the ignition of the 2 BLUE LEDs.



example of operation at power 6

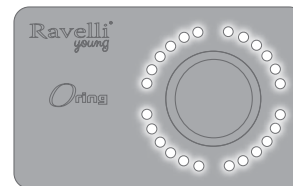


example of operation at power 9

By increasing the power via the knob you will get an equal increase in room fan power, perceiving an immediate feeling of warmth. The real power of the stove instead, will increase gradually, by steps of 20 seconds each, to prevent brazier clogging, or worse, that the stove shuts off due to the sudden increase of combustion air. Avoid increasing and decreasing the power of the stove continuously: given the fact that this is a heat generator fueled with biomass, increases and decreases will never be immediate. The stove requires a few minutes to reach the powers selected, especially when switching from minimum to maximum, or vice versa, by a single operation.

The grate

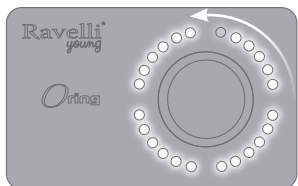
The stoves of Young series are equipped with brazier cleaning function, through increased blow of combustion air at fixed intervals, aimed at keeping the brazier effective, avoiding unpleasant deposits. During brazier cleaning, all 24 O-Ring LEDs will flash continuously, until cleaning completion. Usually, the operation lasts about twenty seconds.



TURNING OFF

To switch off the stove, follow the switch-on steps: keep the middle push-button

pressed down until a turned off LED starts rotating counter-clockwise: release the key. The stove will perform a final cleaning and the animation will remain active until complete cooling of the stove, after which it will go in OFF state, displaying the relative animation

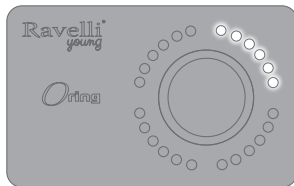


First infeed screw loading

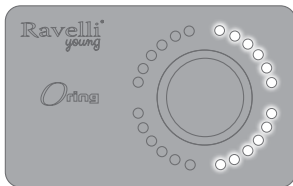
The O-Ring allows you to execute the first infeed screw loading after having filled up the pellet tank, to achieve a correct ignition. Proceed from OFF state, turning the push-button/dial clockwise: each step will cause the 6 BLUE LEDs to turn on. Every 6 LEDs lit up correspond to 30 seconds of loading. It will take 5 sec for the function to become active; if activation is not performed, the O-Ring returns to OFF state.

Press the button for 2 sec: the infeed screw will be activated, loading pellets. If you do not manage to load the infeed screw completely through one operation, repeat the operation until the brazier will be full with pellets. This is not a failed ignition. Therefore, the pellets can be used again, putting them back into the tank.

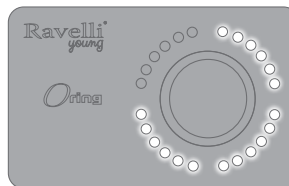
If the function is activated by mistake or the infeed screw is already full, the loading cycle can be interrupted by pressing the button once; the stove will go back to OFF state.



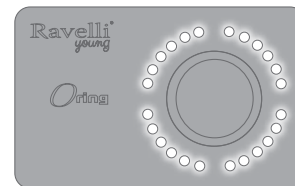
30 sec. >> 6 LEDs lit



60 sec. >> 12 LEDs lit



90 sec. >> 18 LEDs lit



120 sec. >> 24 LEDs lit

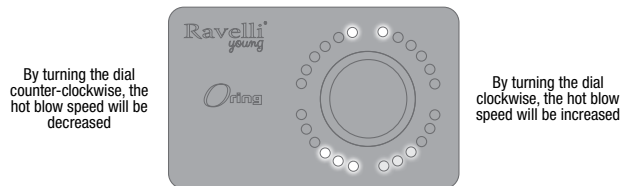
Extra fan blow

Due to its innovative O-ring, the Ravelli Young stove allows the user to vary the blow of room fan for each of the 12 powers of the stove. This feature is particularly useful as it allows to increase or decrease the blow of hot air output by the stove, without varying the amount of pellets burned.

During operation at any power, briefly press the O-Ring button: the following LED display will appear: in the bottom display, 3 BLUE LEDs will light up on the left and 3 RED LEDs on the right, indicating the direction of the increase towards the red (increased blow) or decrease toward the blue (decreased blow); on the top display, 2 BLUE LEDs will light up, one to the right and one to the left, indicating the power of EXTRA blow.

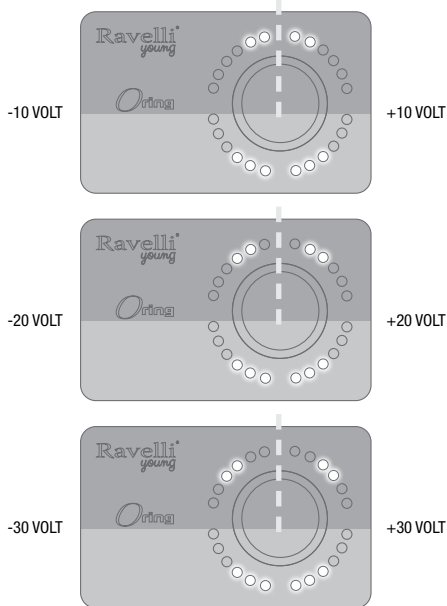
In the center, NORMAL blow (like in the figure). There are 3 increases and 3 decreases available, which will add or remove 10 Volts to/from the current speed of the fan.

NORMAL BLOW - AS PER RATED POWER



If the stove is operating at minimum power (P1), there will be no change if the blow is further decreased; under these conditions, in the opposite case, if the stove is operating at maximum power (P12), there will be no change if the blow will be further increased, as the fan is already operating at the scale limits set

for safe operation. Below are some examples of graphics displayed by the O-Ring when fan speed is increased or decreased.



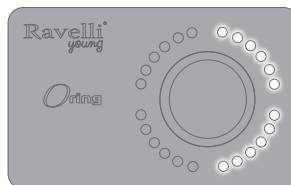
USE THIS FUNCTION CAREFULLY IF THE STOVE IS RUNNING AT MAXIMUM POWER P12: DO NOT SLOW DOWN THE FAN TOO MUCH TO PREVENT THE BODY FROM OVERHEATING AND THE ACTIVATION OF THE WARNING SIGNAL HOT FUME, DESCRIBED IN THE NEXT CHAPTER.

Installation and activation of external thermostat

The Ravelli Young stove enables connecting an external thermostat, when running in T-ON / T-OFF mode, to control the room temperature. The operation should be performed with the aid of an Authorized Support Centre because the

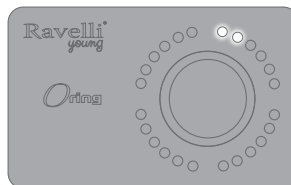
connection requires an intervention on the electronic equipment of the stove. It is required a connector with code 55177. O-Ring operation remains unaltered. It is only added the MODULATION function. Chronothermostat and Eco-Stop are disabled. It will not be possible to switch off the stove from the external thermostat. It will run continuously in modulation mode.

Below is shown the way in which the O-Ring indicates this mode:



example of operation at power 6 STEADILY LIT LEDs

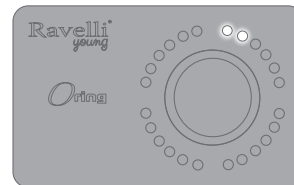
After reaching the set temperature on the external thermostat, the stove enters the modulation mode, storing the operating power and any extra power set.



modulation: the first 2 BLUE LEDs are blinking

During operation in modulation mode, the extra power of the machine cannot be changed. It is, however, possible to change the stored operating power to ensure that, when exiting the modulation mode, the stove functions at the newly set power. The example shows the operation at P.6, further switched to modulation: by rotating the O-Ring dial, we can set the

new power; we will set P.3, which will be displayed for a few seconds through the BLUE LED, returning then to the display of the 2 BLUE FLASHING LEDs. As soon as the thermostat detects the decrease in temperature, it is triggered, and the Young stove will start operating at the new P. Set.



example of operation at power 3 STEADILY LIT LEDs

WARNING SIGN - HOT FUME

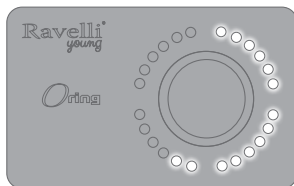
One of the safety devices that controls your Ravelli Young stove, also checks that exhaust fume temperature does not exceed a certain threshold, which creates a hazard.

There are, however, cases in which, even during normal operation, the fume temperature may rise slowly due to adverse weather conditions that slow down the fume flow through the chimney, or the use of the stove for several months without proper seasonal cleaning, resulting in ash deposits that prevent the exchange of fume heat with parts of the stove suitable to disperse it in the house by means of the room fan or the hot fume signal indicates a possible room fan failure. Should the above conditions be encountered, the stove will AUTOMATICALLY switch to HO FUME state:

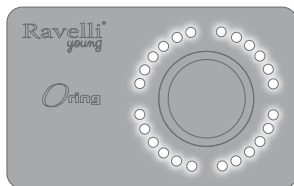
- the O-Ring signals the operation at the set power in that very moment through all 24 LEDs lit up in RED, every 5 seconds, alternatively to the BLUE LEDs, and simultaneously blocks all functions - except for stove switch-off function;
- the room fan switches to maximum operating speed (P12-Volt 220);
- pellets load is reduced to a minimum (P1).

This mode will remain active until fume temperature detected drops by 20°C below the temperature set as safety alarm (250°C). The example below shows a hot fume warning signal:

The BLUE LEDs of the operation at P7 are alternately replaced by the 24 RED LEDs every 5 seconds.



Operation at P7



HOT FUME signal

ALARMS

In the event that there is a problem in the operation of the stove, the electronic control board will signal the type of problem detected using the following method:

- 15 consecutive sound signals with all 24 RED LEDs FLASHING;

- subsequent graphical signal with 2 RED STEADILY LIT LEDs that will identify the problem.

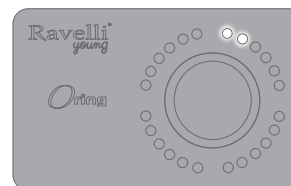
Every alarm condition causes the stove to shut down immediately. The only display represented after error detection shall be the graphical representation with 2 RED LEDs. Write down the position of LIT LEDs to signal it to the Authorized Support Centre. To reset the machine, simply hold down the button/potentiometer of the O-ring until the OFF status will be displayed (See page 20.)

Alarm 1 - BLACKOUT

If there is a blackout during machine operation, there are two possible cases:

1. reset within 10 sec.;
2. reset after more than 10 sec.

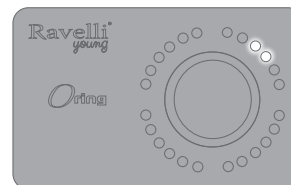
If power is restored within the time slot of the first case, the stove will maintain its regular operation; in the second case, upon power restoration, the stove will enter the alarm 1 BLACK OUT state and on the O-Ring will be displayed the following graphics:



Alarm 2 - FUME TEMPERATURE PROBE

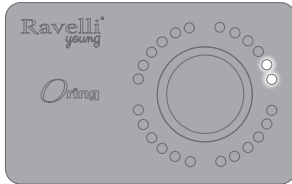
It is triggered when the electronic control board detects a malfunction of the probe that measures the temperature of exhaust fume.

The stove enters the alarm state displaying the error with RED LEDs.



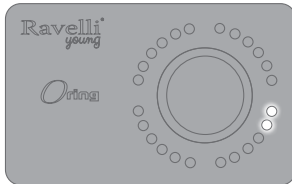
Alarm 3 - FUME OVERHEATING (HOT FUME)

This is not the same signal as the warning HOT FUME signal. It is triggered when fume temperature rises above the set threshold, that cannot be changed for safety reasons. The O-Ring will display the following error through the **RED LEDs**.



Alarm 4 - FUME ENCODER FAULTY

In the event of failure of fume fan or its speed measuring system (RPM), the fume encoder alarm is triggered displaying the error through the **RED LEDs**.

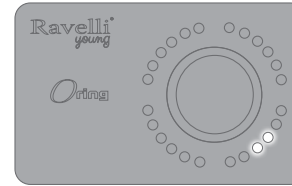


Alarm 5 - FAILED SWITCH-ON

If the heater does not produce a flame within a specified number of minutes and the fume temperature does not rise, the stove will go in Alarm 5 state, due to failed ignition.

It is recommended not to put the pellets from the brazer back into the tank as they may contain burning pellets that may cause the tank to burn into flames. Put the pellets in a container suitable for flammable material (i.g. metal bucket).

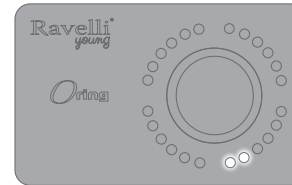
The O-Ring will display the error through the **RED LEDs** as follows:



Alarm 6 - NO PELLETS (or pellets finished)

It occurs when the stove detects a fume temperature below a set threshold during operation, a reduction which, if detected in the absence of other errors, indicates that the pellets in the tank have finished.

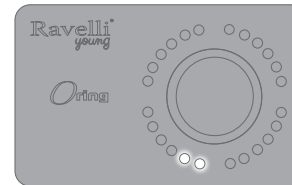
The O-Ring will display the relative error by means of the 2 **RED LEDs** in the position shown in the figure.



Alarm 7 - SAFETY THERMAL BREAKER OVERHEATING

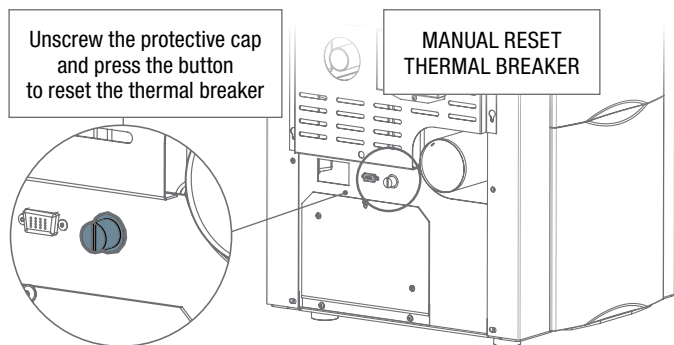
It is triggered when the safety thermostat probe detects a temperature higher than the set threshold.

The thermostat blocks the pellet infeed screw and the electronic board detects the error and blocks the stove; the error is displayed on the O-Ring with **2 RED LEDs** in this position.



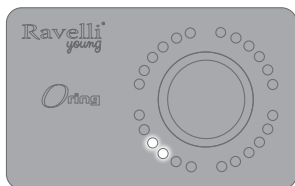


In the case of alarm 07 thermal breaker below shows the location where to operate to reset the thermal switch with manual reset.



Alarm 8 - NO DEPRESSURIZATION


The “no depressurization” alarm is indicating that there are problems with fume exhaust; this condition is encountered when the exhaust flue (smoke duct, flue and chimney) have not been properly maintained for that season or they do not comply with the legislation in force. The alarm can also be triggered in the event of aggressive weather conditions that involve changes in atmospheric pressure repeatedly and continuously. Due to the fact that the device that controls the fume exhaust pressure can no longer expel the fumes, it stops the infeed screw and the electronic board blocks the stove in safe conditions; the relative alarm is displayed with **2 RED LEDS**.



ALARMS (REFERENCE TABLE)

TITLE	REASON	SOLUTION
AL 01 BLACK OUT	No voltage during work phase.	Press the switch off key and switch on boiler switch-on.
		If the problem persists, Contact the Support Service.
AL 02 FUME PROBE	The fume probe is malfunctioning.	Contact the Support Service.
	The fume probe is disconnected from the electronic board.	Contact the Support Service.
AL 03 FUME OVERTEMP.	Combustion in the brazier is not optimal due to clogging or obstructions of internal stove ducts.	Switch off the stove, clean the brazier and the tube bundle and adjust the combustion setting the Pellet/Air values.
	The tangential fan (if provided) is malfunctioning or damaged.	If the problem persists, Contact the Support Service.
AL 04 FUME EXHAUST DAMAGED	Fume exhaust encoder is not working or is connected incorrectly.	Contact the Support Service.
	No power to fume exhaust system.	
	The fume exhaust system is blocked.	
AL 05 NO SWITCH-ON	The pellet tank is empty.	Check for the presence of pellets in the container. Top up, if necessary.
	Pellet calibration and suction during switch on phase is incorrect.	Contact the Support Service.
	The ignition coil is faulty or positioned.	Contact the Support Service.
AL 06 PELLETS FINISHED	The pellet tank is empty.	Check for the presence of pellets in the container. Top up, if necessary.
	The gear motor is not loading pellets.	Empty the tank to see if there are any objects inside that may prevent the proper operation of the auger.
	Not enough pellets loaded.	Regulate pellets setting from "SET AIR/PELLETS".
		If the problem persists, Contact the Support Service.

AL 07 RESETTABLE THERMAL BREAKER	The manual reset thermostat connected to the hopper.	Reset the thermostat by pressing the button on the back of the stove.
	Combustion in the brazier is not optimal due to clogging or obstructions of internal stove ducts.	Switch off the stove, clean the brazier and the tube bundle and adjust the combustion setting the Pellet/Air values. Contact the Support Service.
AL 08 DEPRESSURIZA- TION	The flue is blocked.	Check the flue is free and clean.
	The vacuum meter is faulty.	Contact the Support Service.


 **EACH ALARM CAUSES THE IMMEDIATE SWITCHING OFF OF THE STOVE. PRESS THE SWITCH-ON KEY TO RESET THE ALARM. BEFORE SWITCHING ON THE STOVE AGAIN, CHECK THAT THE SIGNAL HAS BEEN REMOVED AND THAT THE BRAZIER IS PROPERLY CLEANED TO ENSURE CORRECT RESTART.**

MAINTENANCE

Cleaning should be provided by the user

Before any cleaning operation on the stove, implement the following precautions:

- switch off the stove and disconnect the power cord with the stove in “Switched OFF” state;
- make sure all the parts of the stove are cold;
- make sure the ash is completely cooled.

 **PLEASE READ CAREFULLY THE FOLLOWING INSTRUCTIONS TO PERFORM PROPER CLEANING. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY LEAD TO MALFUNCTIONS OF THE STOVE.**

Clean the surfaces

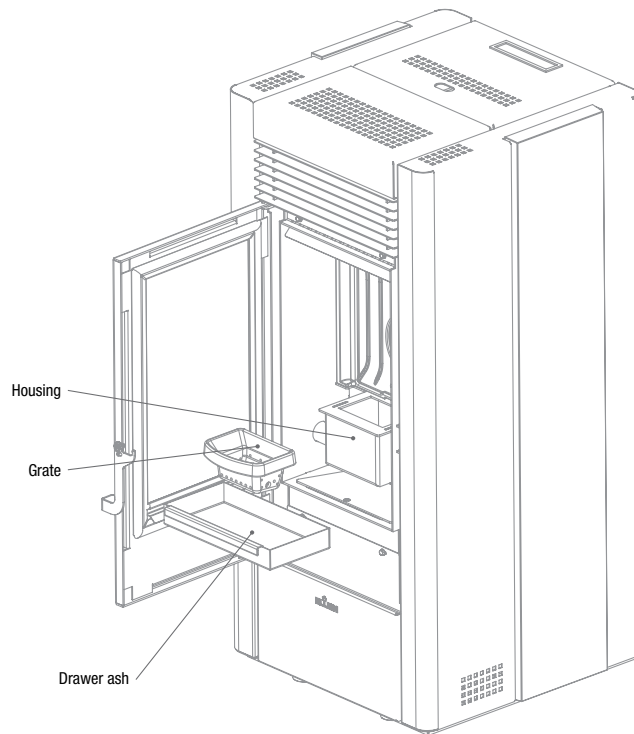
To clean the surfaces of the coated metal parts, use a cloth soaked in water or water and soap. Attention! Use of abrasive detergents or diluents can damage the surface of the stove.

Grate cleaning should be carried out before each switch-on

To ensure proper cleaning before switching on the stove, it is necessary to check

that the brazier is clean and so that they are always excellent combustion, thus avoiding any overheating that may cause changes in the color of the paint or peeling of the door coating. Furthermore, poor cleaning of the brazier can cause stove switch-on problems.

Before removing the brazier and check for any dirt inside it, remember to remove the “grill brazier”. Once the brazier grill is clean it should be fitted in its housing **ALWAYS AFTER** having installed the brazier.





If you use another type of pellets, even of the same brand, this may lead to differences in combustion that may result in greater ash deposits inside the brazier. Correct cleaning, daily, enables the stove to burn in an optimal manner and provide constant heat yield, avoiding malfunctions which over time may require the intervention of technical staff to reset the machine.

Cleaning the ash pan

Remove the drawer from the stove and remove the ash collected using an ash vacuum; be very careful if the brazier is still hot as this can damage the cleaning equipment.



Cleaning operations of the stove depend on the quality of the pellets used and the frequency of use. It may be necessary to carry out these operations on a daily basis.

Cleaning glass

The glass of the door should be cleaned with the stove cooled down using a cotton cloth or paper towel. Usually, we recommend you clean the glass with a damp (water) cloth and ash collected after burning (having an abrasive function).



DO NOT SWITCH ON THE STOVE IF YOU NOTICE ANY DAMAGES ON GLASS SURFACE. CONTACT THE TECHNICAL SUPPORT SERVICE TO HAVE IT REPLACED.

Below are summarised the checks and/or maintenance interventions required for the proper operation of the stove.

PARTS / FREQUENCY	1 DAY	2-3 DAYS	30 DAYS	60-90 DAYS	1 SEASON
Grate	●				
Ash pan		●			
Glass		●			
Suction duct*				●	
Door gasket*					●
Turbulators		●			
Flue*					●
Combustion chamber		●			
Vacuum pellet tank			●		
Electrical-mechanical parts*					●

* Operations to be carried out by authorized technical staff.

WARRANTY

Warranty Certificate

Ravelli srl would like to thank you for agreeing to buy one of our pellet stoves and invites you, the customer, to:

- read the instructions for installation, use and maintenance of the stove.
- note the warranty conditions reported below.

The warranty form attached to the stove must be compiled and stamped by the installer to activate the warranty.

Otherwise the warranty shall not enter into effect.

Warranty conditions

The warranty covers manufacturing material defects, provided the product was not subject to breakages caused by improper use, negligence, incorrect connection, tampering or installation errors.

Not covered by the warranty:

- vermiculite (firex 600)
- the door glass;
- the fibre seals;
- the paint;
- the combustion basket in stainless steel or cast iron;
- the resistor;
- the coloured majolica;
- any damage due to inadequate installation and/or tampering with the stove and/or negligence on the customer's part.

Use of poor quality pellets or any other material which could damage the components of the stove cause the warranty to become invalid, as well as the relevant liability of the manufacturer.

Therefore, we recommend you use pellets that meet the requirements in the specific chapter.

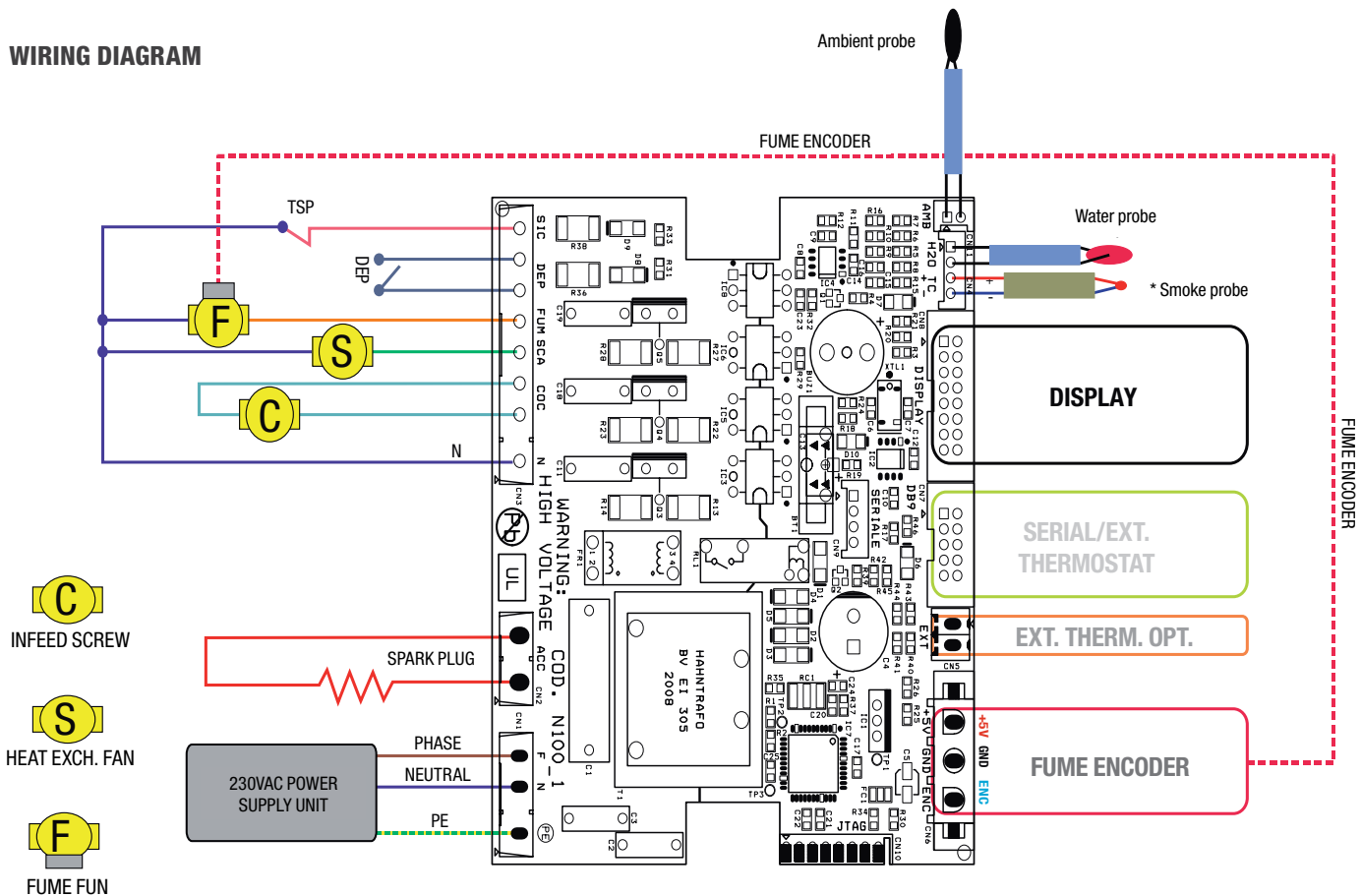
All damages caused by transport are not recognised, therefore we recommend you carefully check the goods on receipt, immediately advising the dealer of any damage. The warranty form must be detached and sent within 8 days of purchase to the following address:

Ravelli srl - via Kupfer, 31 25036 Palazzolo s/O Brescia (ITALY)

Info and problems

For any information support request, please contact the local dealer or support centre as they are authorized to provide solutions to all requests and intervene directly, when necessary.

WIRING DIAGRAM



- INFEEED SCREW
- HEAT EXCH. FAN
- FUME FUN

DEP=VACUUM METER
 TSP=PELLET TANK SAFETY THERMOSTAT

* to ensure proper operation please observe the polarity of the thermocouple



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