



**RAVELLI**  
*il fuoco intelligente*


USE AND MAINTENANCE MANUAL



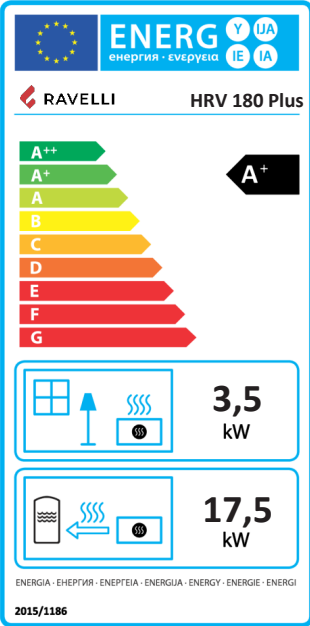
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**HRV 180 PLUS**



	<b>SCHEDA PRODOTTO</b>	<b>PRODUCT DATASHEET</b>
	<b>FICHE DE PRODUIT</b>	<b>PRODUCTKAART</b>
	<b>PRODUKTDATENBLATT</b>	<b>FICHA DEL PRODUCTO</b>

**EU 2015/1186**

← 31/12/2021	<b>Marca / Trademark / Marque / Merk / Marke / Marca</b>	<b>Ravelli</b>
	<b>Modello / Model / Modèle / Model / Modell / Modelo</b>	<b>HRV 180 Plus</b>
	<b>Classe di efficienza energetica / Energy Efficiency class / Classe d'Efficacité Énergétique / Energie-efficiëntieklasse / Energieeffizienzklasse / Clase de eficiencia energética</b>	← 31/12/2021 A+      01/01/2022 → A+
	<b>Potenza termica diretta / Direct thermal power / Puissance thermique directe / Directe warmteafgifte / Direkte Wärmeleistung / Potencia calorífica directa</b>	3,5 kW
	<b>Potenza termica indiretta / Indirect thermal power / Puissance thermique indirecte / Indirecte warmteafgifte / Indirekte Wärmeleistung / Potencia calorífica indirecta</b>	17,5 kW
	<b>Indice di efficienza energetica / Energy Efficiency Index / Indice de eficiencia energética / Energie-efficiëntie-index / Energieeffizienzindex / Índice de eficiencia energética</b>	← 31/12/2021 127      01/01/2022 → 120
	<b>Efficienza utile (Potenza nominale) / Useful efficiency (Nominal power) / Rendement utile (puissance nominale) / Nuttig rendement (bij nominale) / Brennstoff-Energieeffizienz (Nennwärmeleistung) / Eficiencia energética útil (potencia nominal)</b>	90,0 %
	<b>Efficienza utile (Potenza ridotta) / Useful efficiency (Reduced power) / Rendement utile (puissance minimale) / Nuttig rendement (bij minimale) / Brennstoff-Energieeffizienz (Mindestlast) / Eficiencia energética útil (potencia mínima)</b>	94,0 %
	<b>Rispettare le avvertenze e le indicazioni di installazione e manutenzione periodica riportate nel manuale di istruzioni. / Comply with the warnings and instructions concerning installation and routine maintenance provided in the instruction manual. / Respecter les avertissements et les indications sur l'installation et l'entretien périodique fournis dans le manuel d'instructions. / Neem de waarschuwingen en instructies voor installatie en periodiek onderhoud in acht zoals aangegeven in de hoofdstukken van de gebruiksaanwijzing. / Beachten Sie die Warnungen und Hinweise betreffend die Installation und regelmäßige Wartung in der Bedienungsanleitung. / Respete las advertencias y las indicaciones de instalación y mantenimiento periódico, detalladas en los capítulos del manual de instrucciones.</b>	

	<b>PRODUCT DATASHEET</b>	<b>FICHA DO PRODUTO</b>
	<b>ΔΕΛΤΙΟ ΠΡΟΪΟΝΤΟΣ</b>	<b>PRODUKTBLAD</b>
	<b>KARTA PRODUKTU</b>	<b>PODATKOVNI LIST IZDELKA</b>

**EU 2015/1186**

01/01/2022 →	<b>Trademark / Marca / Μάρκα / Mærke / Marka / Blagovna znamka</b>	<b>Ravelli</b>
	<b>Model / Modelo / Μοντέλο / Model / Model / Model</b>	<b>HRV 180 Plus</b>
	<b>Energy Efficiency class / Classe de Eficiência Energética / Κατηγορία ενεργειακής απόδοσης / Energiklasse / Klasa efektywności energetycznej / Razred energetske učinkovitosti</b>	← 31/12/2021 A+      01/01/2022 → A+
	<b>Direct thermal power / Potência calorífica direta / Άμεση θερμική ισχύς / Direkte varmedelse / Bezpośrednia moc produktu / Neposredna izhodna toplotna moč</b>	3,5 kW
	<b>Indirect thermal power / Potência calorífica indireta / Έμμεση θερμική ισχύς / Indirekte varmedelse / Pośrednia moc produktu / Posredna izhodna toplotna moč</b>	17,5 kW
	<b>Energy Efficiency Index / Índice de eficiência energética / Δείκτης ενεργειακής απόδοσης / Indeks energieffektivitet / Wskaźnik efektywności energetycznej / Kazalo energetske učinkovitosti</b>	← 31/12/2021 127      01/01/2022 → 120
	<b>Useful efficiency (Nominal power) / Eficiência energética útil (potência nominal) / Ωφέλιμη ενεργειακή απόδοση (ονομαστική ισχύς) / Virkningsgrad (nominel varmedelse) / Sprawność użytkowa (nominalnej mocy) / izkoristek energije (nazivni izhodni moči)</b>	90,0 %
	<b>Useful efficiency (Reduced power) / Eficiência energética útil (potência mínima) / Ωφέλιμη ενεργειακή απόδοση (ελάχιστο ισχύς) / Virkningsgrad (mindste varmedelse) / Sprawność użytkowa (minimalnym mocy) / izkoristek energije (nazivni izhodni moči)</b>	94,0 %
	<b>Comply with the warnings and instructions concerning installation and routine maintenance provided in the instruction manual. / Respeitar as advertências e as indicações de instalação e manutenção periódica referidas nos capítulos do manual de instruções. / Τηρείτε τις προειδοποιήσεις και τις οδηγίες εγκατάστασης και περιοδικής συντήρησης που αναφέρονται στα κεφάλαια του εγχειριδίου των οδηγιών. / Overhold advarslerne og angivelserne for installation og vedligeholdelse, som angivet i kapitel i brugsvejledningen. / Należy przestrzegać ostrzeżeń i wskazówek dotyczących instalacji i okresowej konserwacji podanych w rozdziałach w instrukcji obsługi. / Upoštevajte</b>	

# DECLARATION OF PERFORMANCE

Declaration of performance according to Regulation (EU) 305/2011



**n. : 191CPR13.07**

- Unique identification code of the product type:  
**143-00-001A, residential space heating appliance, with water, fired by wood pellets**  
**EN 14785:2006**
- Type, batch or serial number or any other element allowing identification of the construction product as required under Art. 11(4):  
**HRV 180 Plus**
- Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:  
**Residential space heating appliance, with water, fired by wood pellets**
- Name, registered trade name or registered trademark and contact address of the manufacturer as required by Art. 11 (5):  
**Ravelli**  
**Aico S.p.A.**  
**Via A. Kupfer, 31**  
**25036 Palazzolo s/O (Bs) Italia**
- Where applicable, name and contact address of the authorised representative whose mandate covers the tasks specified in Article 12(2):  
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- System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V:  
**System 3, System 4**
- In case of the declaration of performance concerning a construction product covered by a harmonised standard:  
**The notified laboratory IMQ (NB 0051) performed the determination of the product type on the basis of type testing under system 3 and issued test report CS18-0030646-01**
- Declared performances:

<b>Harmonized technical specification:</b>	<b>EN 14785:2006</b>
<b>Essential characteristics</b>	<b>Performance</b>
<b>Fire safety</b>	
<b>Reaction to fire</b>	<b>A1</b>
<b>Distance to combustible materials</b>	<b>Minimum distances (mm):</b> rear = 200 sides = 200 front = 1000 ceiling = -- floor = 40
<b>Risk of burning fuel falling out</b>	<b>Pass</b>
<b>Emission of combustion products</b> (at 13% of O <sub>2</sub> )	<b>Nominal heat output</b> CO 0,012 % NOx 130 mg/Nm <sup>3</sup> OGC 5 mg/Nm <sup>3</sup> PM 12 mg/Nm <sup>3</sup>  <b>Reduced heat output</b> CO 0,032 % OGC 10 mg/Nm <sup>3</sup>
<b>Surface temperature</b>	<b>Pass</b>
<b>Electrical safety</b>	<b>Pass</b>
<b>Cleanability</b>	<b>Pass</b>
<b>Maximum operating pressure</b>	<b>2</b>
<b>Flue gas temperature at nominal heat output</b>	<b>190 °C</b>
<b>Mechanical resistance(to carry a chimney/flue)</b>	<b>NPD</b>
<b>Nominal heat output</b>	<b>21,0 kW</b>
<b>Room heating output</b>	<b>3,5 kW</b>
<b>Water heating output</b>	<b>17,5 kW</b>
<b>Efficiency</b>	<b>η 90 % Nominal heat output</b> <b>η 94 % Reduced heat output</b>

- 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.

Signed for and on behalf of the manufacturer **Giovanni Scarlini, CEO**

Place **Palazzolo sull'Oglio**

Date **26/09/2018**

Sign

**Dichiarazione di conformità UE**  
**EU Declaration of Conformity**  
**Declaration de Conformite UE**  
**(DoC)**



Il costruttore  
The manufacturer  
Le fabricant

Aico S.p.A.  
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25036 Palazzolo s/O (Bs) – Italy  
ph: +39 030 74 02 939, e-mail:[info@ravelligroup.it](mailto:info@ravelligroup.it)

DICHIARA che la dichiarazione viene rilasciata sotto la propria responsabilità e si riferisce al seguente prodotto:

*DECLARES that the DoC is issued under our sole responsibility and belongs to the following product:*

*DÉCLARE que la déclaration est délivré sous notre seule responsanilité et elle se refère au suivant produit:*

Tipo di prodotto	<b>Stufa a pellet</b>
<i>Product type</i>	<b>Pellet stove</b>
<i>Type de produit</i>	<b>Poêle à granulés de bois</b>

Marchio  
Trademark  
Marque

Ravelli

Modello  
Model  
Modèle

HRV 180 Plus

L'oggetto della dichiarazione di cui sopra è conforme alla pertinente normativa di armonizzazione dell'Unione:

*The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:*

*L'objet de la déclaration décrit ci-dessus est conforme à l'harmonisation de l'Union concernant la législation la directive:*

- **2014/30/EU, EMCD**
- **2014/35/EU, LVD**
- **2011/65/EU, RoHS**
- **2009/125/EC Ecodesign**

Sono state applicate le seguenti norme armonizzate e/o specifiche tecniche:

*The following harmonised standards and/or technical specifications have been applied:*

*Les normes et les spécifications techniques harmonisées suivantes ont été appliquées:*

EN 55014-1	EN 60335-1		
EN 55014-2	EN 60335-2-102	EN 50581	(EU) 2015/1185
EN 61000-3-2	EN 62233		
EN 61000-3-3			

Palazzolo Sull'Oglio (BS), ITALY  
20/07/2018

  
\_\_\_\_\_  
(Giovanni Scarlini, CEO)



## ***Preface***

Dear Customer, We would like to thank you for choosing one of our stoves.

We invite you to read this manual carefully, before starting installation and use, so that you are able to benefit from all of its characteristics better and in full safety. It contains all necessary information for correct installation, start-up, operation, cleaning, maintenance, etc.

Keep this manual in a suitable location, do not discard it without reading it.

Incorrect installation, maintenance and improper use of the product relieve the Manufacturer of all liability deriving from use of the stove.

For further information and requirements contact your Ravelli-authorized Technical Assistance Centre.

All rights reserved. No part of this instructions manual can be reproduced or transmitted through any electronic or mechanical means, including photocopies, recordings or any other storage system, for other purposes that are not exclusively use by the buyer's staff, without the express written consent of the Manufacturer.

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**IDENTIFICATION****Stove identification****Type of product**

PELLET STOVE

**Model**

HRV 180 PLUS

**Manufacturer identification****Manufacturer**

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Chiari (BS) - Italy  
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info@ravelligroup.it  
www.ravelligroup.it

**Reference standards**

The HRV 180 PLUS stove that this manual refers to are compliant with the regulation:

305/2011 CONSTRUCTION PRODUCT REGULATION

And observe the following harmonised standard:

EN 14785; EN 55014-1; EN 55014-2; EN 61000-3-2; EN 61000-3-3; EN 60335-1; EN 60335-2-102; EN 62233; EN 50581; ETSI EN 300220-1

All local laws, including national and European standards, must be followed for the installation of the appliance.

## WARRANTY

### **Certificate of warranty**

Ravelli thanks you for the trust granted with the purchase of one of its products and invites the purchaser to:

- read the installation, use and maintenance instructions for the product;
- read the warranty conditions contained below.

### **Warranty conditions**

The warranty for the Customer is acknowledged by the Dealer under the terms of law.

The Dealer acknowledges the warranty only if the product has not been tampered with and only if it has been installed in accordance with the Manufacturer's instructions.

The limited warranty covers manufacturing material defects, as long as the product has not broken due to an incorrect use, negligence, incorrect connection, tampering, installation errors.

The warranty becomes null and void even if only one requirement in this manual is not complied with.

The following are not covered by warranty:

- the combustion chamber refractory stones;
- the door glass;
- the gaskets;
- the paint job;
- the stainless steel or cast iron combustion grille;
- the resistance;
- the Majolica cladding;
- the aesthetic parts;
- any damages caused by unsuitable installation and/or use of the product and/or shortcomings on the part of the customer.

The use of poor quality pellet or any other unauthorised fuel may damage the product's components, cause its warranty to be voided and as a result eliminate the connected manufacturer liability.

It is therefore recommended to use good quality pellet that fulfils the requirements listed in the dedicated chapter.

All damages caused by transportation are not recognised, for this reason it is recommended to carefully check goods upon receipt, immediately warning the reseller of any damage.

### **Registration of warranty**



To activate the warranty, it is necessary to register the product on the Guarantee Portal on the website [www.ravelligroup.it](http://www.ravelligroup.it), by entering your data and the purchase receipt.

### **Info and problems**

Dealers authorised by Ravelli use a trained Technical Service Centre network to meet the Customer's requirements. For any information or request for assistance, please contact your Dealer or the Technical Service Centre.

## GENERAL INFORMATION

### Supply and safe-keeping

The manual is supplied in printed format.

Keep this manual safe, with the stove, so that the user can consult it easily.

The manual is an integral part, for safety reasons, therefore:

- **it must be kept intact** (in full). If it gets lost or ruined it is necessary to immediately ask for a new copy:
- **it must be kept with the stove until demolition** (including relocation, sale, rental, lease, etc....).

The Manufacturer will not be held liable for improper use of the stove and/or damage caused by operations that are not set forth in the technical documentation.


### Language

The original manual was written in Italian.

Any translations into additional languages must be carried out based on the original instructions.

The Manufacturer is liable for the information contained in the original instructions; the translations into different languages cannot be fully verified therefore if any inconsistency arises it will be necessary to follow the text in the original language or contact our Technical Documentation Office.

### Symbols used in the manual

symbol	definition
<b>! IMPORTANT</b>	<i>This symbol is used to identify particularly important information in the manual. This information also concerns the safety of users involved in using the stove.</i>
	<i>This symbol is used to identify important warnings for the safety of the user and/or the stove.</i>

## SAFETY MEASURES

### General safety warnings

#### **! IMPORTANT**

Read this instructions manual carefully before stove installation and use. Failure to observe the instructions set forth herein can void the warranty and/or cause damage to property and/or people.



Stove installation, system verification, operation verification and initial calibration must be carried out exclusively by qualified and authorised staff.



The stove needs to be connected to a single chimney that guarantees the draught declared by the Manufacturer and observes the installation regulations that apply to the installation site.



The room where the stove is installed must have an air intake.



The stove must not be used as an incinerator or differently from its purpose



Do not use any fuel other than fire pellet. It is strictly forbidden to use liquid fuels.



It is prohibited to use the stove with the door or ash drawer open or the glass broken.



Do not touch the hot surfaces of the stove without suitable protective equipment, to avoid getting burned. When it is running, the outer surfaces reach hot temperatures to the touch.



It is forbidden to make unauthorised changes to the stove.



Before using the stove it is necessary to know the position and function of the controls.



If the chimney catches fire you must call the fire brigade.



Only use original spare parts. Any tampering and/or replacements that have not been authorised by Ravelli can pose a danger to the user's safety.



**In the event of particularly adverse weather conditions, the safety systems could intervene and switch off the stove. In any case, do not disable the safety systems.**

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. Should the stove be inactive for prolonged periods: we recommend you contact the technical support service 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.

### Residual risks

The stove was designed so as to guarantee the user's essential safety requirements.

Safety was integrated into the stove's design and construction as much as possible.

For every residual risk there is a description of the risk and the zone or part that it applies to (unless the risk applies to the entire stove overall). Procedure-related information is also provided on how to avoid the risk and on the correct use of the personal protective equipment required by and made compulsory by the Manufacturer.

residual risk	description procedure-related information
Risk of burns 	When the stove is running, it may reach high temperatures to the touch, especially on its external surfaces. Take care to avoid burns and use the specific tools if necessary. Use the supplied glove to open pellet cover for loading operations.

## DESCRIPTION OF THE STOVE

### Intended use

The appliance in question is intended for:

operation	allowed fuel	forbidden	setting
Radiant and convection heating, by burning:	pellet	Any fuel other than the permitted ones.	Residential or Commercial

The stove is designed and built to work safely if:

- it is installed by qualified staff according to the specific standards;
- it is used within the limits declared in the contract and herein;
- the operating manual procedures are followed;
- routine maintenance is carried out according to the times and methods set forth;
- extraordinary maintenance is promptly carried out when needed;
- safety devices are not removed and/or bypassed.

## ! IMPORTANT

**This stove must be intended for the use it was specifically designed for.**

### Reasonably foreseeable incorrect use

Reasonably foreseeable incorrect use is listed below:

- using the stove as an incinerator;
- using the stove with fuel other than pellet;
- using the stove with liquid fuels;
- using the stove with the door open and the ash drawer out.

Any use of the appliance other than intended must be preventively authorised in writing by the Manufacturer. Without said written authorisation, the use is considered "improper". Any contractual and non-contractual liability of the manufacturer is excluded for damages to persons, animals or property due to installation and maintenance adjustment errors and improper use.

### Obligations and forbidden actions

#### Obligations

The user must:

- read this instructions manual before performing any operation on the stove;
- the appliance must not be used by children under the age of 8 or by people with reduced physical, sensorial or mental capacities or without experience or without the necessary knowledge, and always with supervision;
- do not use the stove improperly, i.e. for uses other than those described in the "INTENDED USE" paragraph;
- it is strictly forbidden to use liquid fuels;
- keep objects that are not heat and/or flame-resistant at a safe distance;
- only and exclusively load the stove with pellet with the characteristics described herein;
- connect the stove to a regulation chimney;
- connect the stove to the extraction system by a pipe or outdoor air intake;
- always perform maintenance with the stove off and cold;
- perform cleaning activities at the frequency stated herein;
- use original parts recommended by the Manufacturer.

#### Forbidden actions

The user must never:

- remove or change the safety devices without authorisation;
- perform operations or manoeuvres of his/her own initiative that are not part of his/her job description, meaning that he/she might jeopardise his/her own safety and that of others;
- use fuels other than pellet and those allowed for lighting;
- use the stove as an incinerator;
- use flammable or explosive substances near the stove during operation;
- use the stove with the door open and/or with the glass ruined or broken;
- close the combustion air and smoke outlet openings, whatsoever;
- use the stove to dry laundry;
- replace or change some of the stove parts.

## TECHNICAL CHARACTERISTICS

	HRV 180 PLUS	U
smoke outlet pipe Ø	80	mm
Max. heating volume	500	m <sup>3</sup>
Heating input reduced - nominal	6,4 - 23,6	kW
Heating output reduced - nominal	6,1 - 21,0	kW
Water heating output	4,9 - 17,5	kW
Electrical consumption during nominal heat output*	1,3 - 4,9	W
Electrical connection	290	V - Hz
Hopper capacity	230 V - 50 Hz	kg
Hourly consumption	32	Kg/h
Loading interval	7 - 25	h
Red. - Nom. Yield	94 - 90	%
CO at 13% of O <sub>2</sub>	0,032 - 0,012	%
Smoke flow	5,7 - 12,0	g/s
Minimum draft	10 - 0,1	Pa - mbar
Smoke temperature	76 - 190	°C

The data shown here is provided as a guideline and is not binding, and may change based on what type and quality of wood is used. Ravelli reserves the right to make any changes in order to improve product performance.

### Characteristics of the fuel

Wood pellet is a fuel made of pressed wood sawdust, often recovered from processing scraps of carpentries. The material used cannot contain any extraneous substance such as, for example, glue, lacquer or synthetic substances.

The sawdust, once it has been dried and cleaned from impurities, is pressed using a die with holes: as a result of high pressure, the sawdust heats up by activating the natural wood binders; this way the pellet maintains its shape even without adding artificial substances.

Wood pellet density varies based on the type of wood and can exceed that of natural wood by 1.5 - 2 times.

The cylinders have a diameter of 6 mm and a variable length between 10 and 40 mm.

Their density is equal to approximately 650 kg/m<sup>3</sup>. Due to their low water content (< 10%) they have a high energy content.

The UNI EN ISO 17225-2:2014 standard (that replaces the EN PLUS standard) defines pellet quality by specifying three classes: A1, A2 and B. Maintain fuels and other flammables at a suitable distance.

Ravelli recommends using wood pellet classified A1 and A2 according to the EN ISO 17225-2:2014 standard, or certified DIN PLUS (more restrictive than the A1 class) or ONORM M 7135.

Pellet may be light or dark coloured, it is normally bagged into bags that show the name of the producer, the main characteristics and classification according to standards.

## **! IMPORTANT**

**Pellets must be transported and stored in a dry area. Upon contact with humidity they swell and become unusable: it is therefore necessary to protect them from humidity, both during transport and during storage.**

### Non-permitted fuels

We recommend not using the following materials as fuel:

- wood
- treated wood (painted, lacquered, glued wood etc.);
- sawdust or chips
- liquid fuel
- coal or other fossil fuels
- plastic and derivatives
- treated paper and cardboard
- waste

- fuels that release toxic or polluting substances

Using these fuels, on top of being forbidden due to the emission of polluting and harmful substances, causes the stove to deteriorate more rapidly and debris to accumulate in the stove and in the smoke evacuation system, thereby reducing performance and safety.



The gases produced by these fuels are dangerous for the environment and for your health!

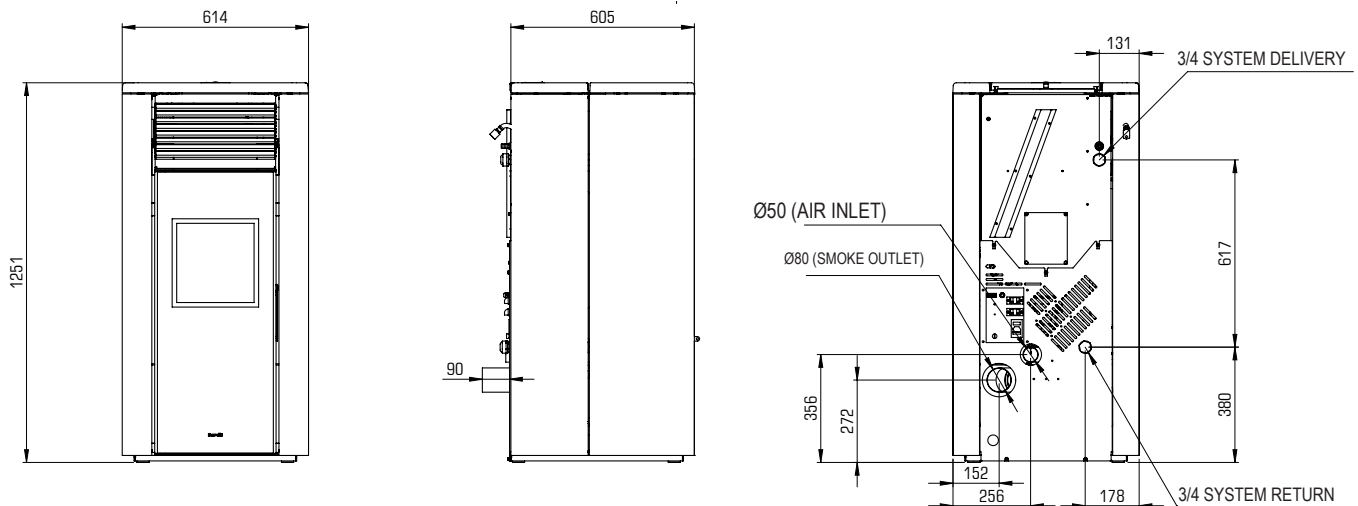


Using fuel that is not compliant with the above will void the warranty.

### Measurements

	HRV 180 PLUS	Unit of measurement
Height	1251	mm
Width	614	mm
Depth	605	mm
Empty weight	200	kg

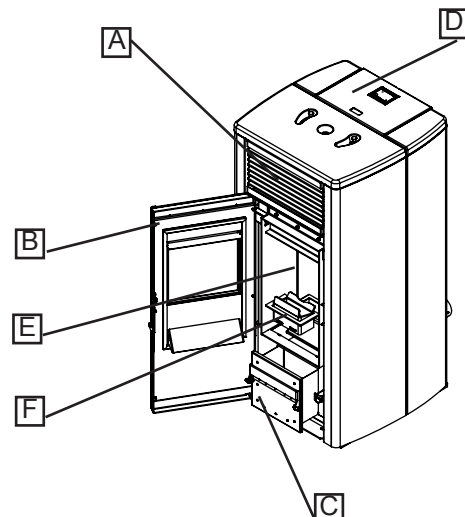
### HRV 180 PLUS technical diagram



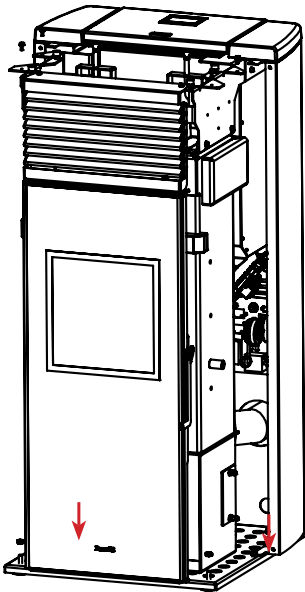
The data shown below is provided as a guideline and is not binding, and may change based on what type of pellet is used. Ravelli reserves the right to make any changes in order to improve product performance.

### Main parts

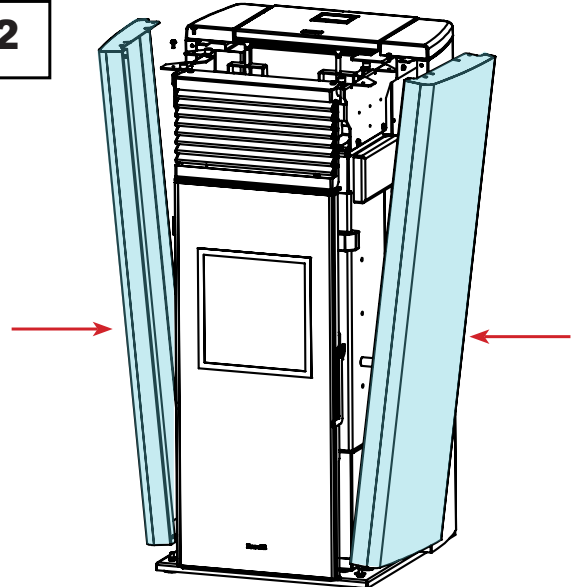
	element
A	Grid for air passage
B	Combustion chamber door
C	Ashes drawer
D	Pellet cover
E	Combustion chamber
F	Brazier



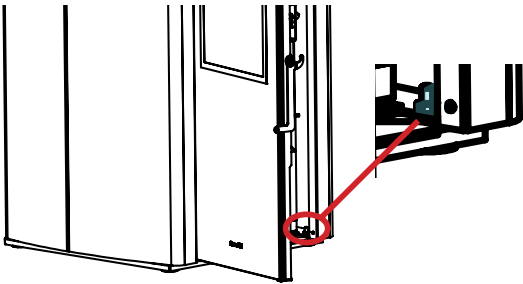
**1**



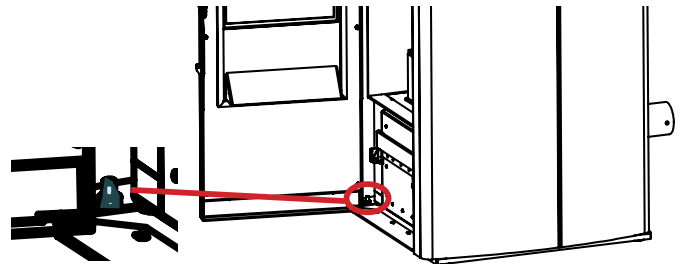
**2**



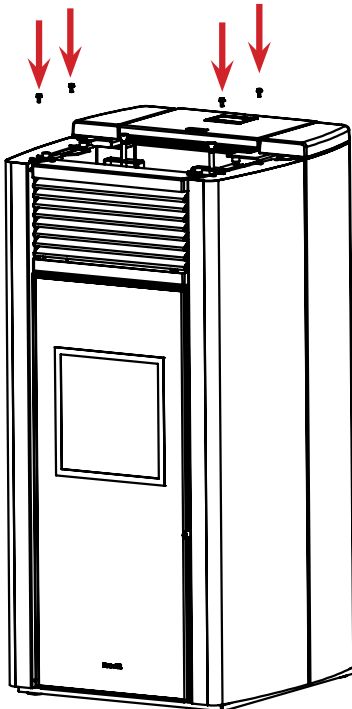
**3**



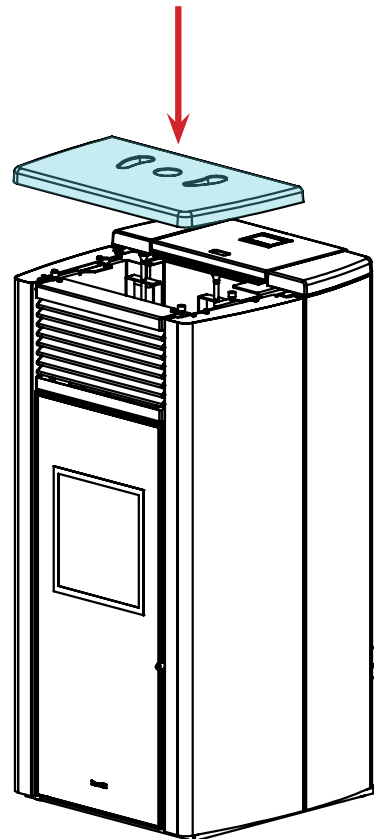
**4**



**5**



**6**



## SHIPPING AND INSTALLATION

### Safety warnings for transportation and installation

#### **! IMPORTANT**

The stove must be installed by a qualified technician, who must issue a declaration of conformity of the system to the purchaser, taking full responsibility for stove installation and correct operation.

#### **! IMPORTANT**

The stove installation site must be chosen so that the generated heat can spread evenly throughout the rooms that you wish to heat.



The stove needs to be connected to a single chimney that guarantees the draught declared by the Manufacturer and observes the installation regulations that apply to the installation site.



The room where the stove is installed must have an air intake.



The air vent must be installed in such a way that it can not be blocked.

The Manufacturer will not be held liable for installation that is not compliant with the laws in force, incorrect air circulation in the rooms and inappropriate use of the appliance.

In particular, it is necessary:

- that the appliance be connected to a smoke evacuation system duly sized to guarantee the draught declared by the Manufacturer, that is tight and observes the distances from flammable materials;
- that there is a suitable combustion air intake in compliance with the type of installed product;
- that other installed combustion appliances or devices do not create a vacuum in the room where the stove is installed;
- that the safety distances from flammable materials are observed.

Verification of system compatibility has a priority over any other assembly or installation operation.

#### **! IMPORTANT**

**Local administrative regulations and particular requirements of the authorities pertaining to the installation of combustion appliances, the air intake and the smoke evacuation system, may vary based on region or nation. Check with your local authorities if there are stricter laws than set forth herein.**

### Packaging

When the stove arrives, check:

- that it is the model you ordered;
- that it has not been damaged during shipping.

Any complaints must be reported to the deliveryman (also on the delivery note) upon receipt.



**Check the capacity of the floor before handling and positioning the stove.**

To handle the stove in its packaging, follow the procedure below:

- 1 Position the pallet truck forks in the slots under the wooden pallet.
- 2 Lift slowly.
- 3 Place the stove near the chosen location for installation.



**The stove always needs to be handled vertically. Take extra care to protect the door and its glass against mechanical impact that could jeopardise their integrity**

To unpack the stove, follow the procedure described below:

- 1 Cut the straps and remove the wooden reinforcement frame resting on the box
- 2 Slowly lift the cardboard box
- 3 Remove any bubble-wrap or similar
- 4 Remove the stove from the pallet and position the appliance in the chosen location, ensuring that it is compliant with the directions.

#### **! IMPORTANT**

**The end user is responsible for disposing of the packaging in accordance with the laws in force in the country of installation.**



### Set-ups for the smoke evacuation system



Be careful when building the smoke evacuation system and observe the regulations in force in the country where the stove is installed.

### **! IMPORTANT**

The Manufacturer will not be held liable for incorrectly sized and non-regulation smoke evacuation systems.

### Smoke ducts and fittings

The term smoke duct indicates all ducts that connect the combustion equipment to the chimney.

The following requirements need to be applied:

- observe product standard EN 1856-2;
- the horizontal sections must have a minimum slope of 3% upwards;
- the length of the horizontal section must be as minimum as possible, and its projection on the horizontal plane must not exceed 2 metres;
- changes in direction must not have an angle of more than 90° (45° bends are recommended);
- the number of direction changes, including the one necessary for insertion into the chimney, must not exceed 3;
- the cross section must have a constant diameter, the same from where it exits the firebox up to the fitting into the chimney;
- it is forbidden to use flexible metal and fibre cement pipes;
- smoke ducts must not cross rooms where the installation of combustion equipment is prohibited.

In any case, the smoke ducts must be sealed against combustion products and condensation, as well as insulated if they lead outside of the installation room.

Installing manual draught adjustment devices is not allowed.

### **! IMPORTANT**

Creating an initial straight vertical smoke duct section of at least 1 m to ensure proper smoke ejection is mandatory.

### Chimney

The chimney is a particularly important element for correct stove operation.



The chimney must be sized so as to guarantee the draught declared by the Manufacturer.



Do not connect the stove to a collective chimney.

The chimney must be built applying the following regulations:

- it must observe product standard EN 1856-1;
- it must be made of materials that are suitable to guarantee resistance against normal mechanical, chemical and thermal stress and be correctly thermally insulated to limit the formation of condensation;
- it must be mainly vertical and not feature any bottlenecks along its entire length;
- it must be correctly spaced with an air gap and insulated from flammable materials;
- there must be a maximum of 2 changes in direction and angles must not exceed 45°;
- the chimney inside the home, however, must be insulated and can be inserted into a skylight shaft, as long as it respects standards regarding placing inside a tube;
- the smoke conduit must be connected to the chimney using a "T" fitting with an inspection collection chamber for combustion residue and especially for collecting condensation.

### **! IMPORTANT**

It is necessary to check the safety distances that need to be observed when there are flammable materials and the type of insulating material that needs to be used is on the chimney data plate.



Use watertight pipes with silicone seals.



It is forbidden to use the discharge mounted directly on the wall or directed towards indoor spaces and any other type of discharge that is not set forth by the regulation in force in the country of installation (Note: in Italy only roof-discharge is allowed).

### Chimney pot

The chimney pot, i.e. the top end of the chimney, must fulfil the following characteristics:

- the cross-section of the smoke outlet must be at least twice the internal cross-section of the chimney;
- it must stop water or snow from getting in;
- make sure the smoke is taken away even when there is wind (wind resistant chimney pot);
- the outlet height must be outside of the reflux zone (refer to national and local regulations to calculate the reflux zone);
- it must always be built at a distance from antennas or dishes, it must never be used as support.

### Installation



For appliance installation and use it is necessary to observe all of the local, national and European laws and regulations.



Stove installation and the preparation of the building work must observe the regulation in force in the country of installation (ITALY = UNI 10683).

### **! IMPORTANT**

The installation activities must be carried out by a technician that is qualified and/or authorised by the Manufacturer. The staff in charge of installation must issue a declaration of conformity of the system to the buyer, whereby they take full responsibility for the final installation and good operation of the installed product.

Ravelli shall not be held liable if these precautions are not followed.

### Requirements for the installation premises

The stove installation room must be sufficiently ventilated. To fulfil this requisite it is necessary to equip the room with an air intake connected to the outdoors.

### **! IMPORTANT**

The installation room must have an air intake with a free cross-section of at least 100 cm<sup>2</sup>.

### **! IMPORTANT**

For installation in the presence of other combustion appliances or VMC system it is necessary to check the appliance for correct operation.

The stove must be placed inside living quarters. It must never be installed outdoors. The volume of the room where it is installed must be suitable for the power of the appliance and, in any case, greater than 15 m<sup>3</sup>.



#### ATTENTION!

When extraction fans (example: extraction hoods) are used in the same room or space as the stove, this can cause problems to stove operation.



The stove must be installed on a floor with suitable load capacity. If the existing position does not fulfil this requirement, it is necessary to take due measures (for example, using a load distribution plate).

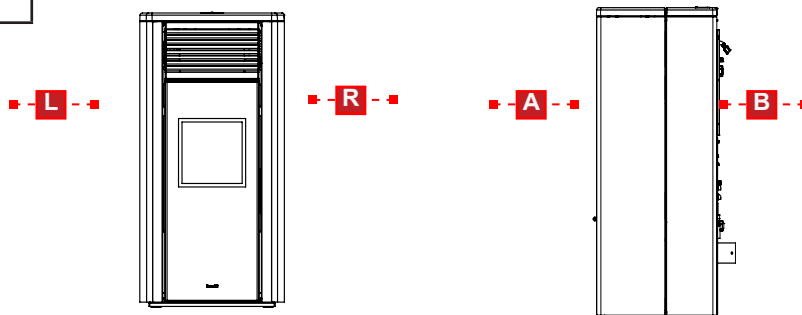


#### ATTENTION!

provide due insulation if the surface is made of flammable material.

If the side walls adjacent to the stove are made of a flammable material, it will be necessary to position the stove at least 30 cm from them.

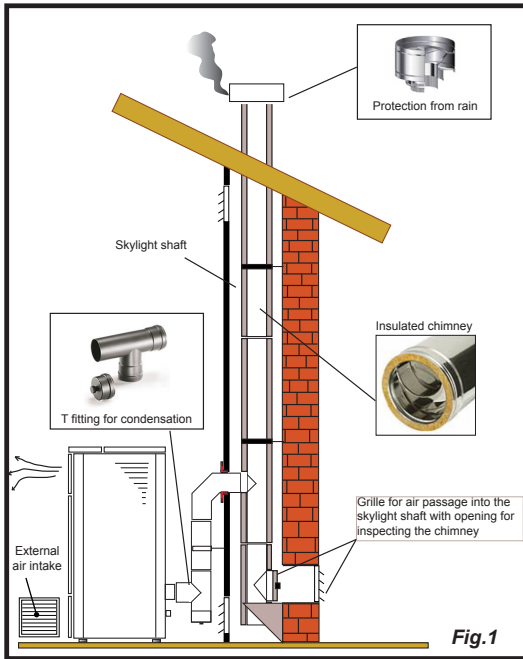
Minimum clearances from combustible materials	
R Right side	200 mm
L Left side	200 mm
B Rear	200
A Front	> 800 mm



If the floor that the stove is standing on is flammable, we recommend duly insulating it. Objects and parts that are heat-sensitive or flammable cannot be stored near the stove; in any case keep these objects at a minimum frontal distance of 100 cm from the most external point of the appliance's footprint.

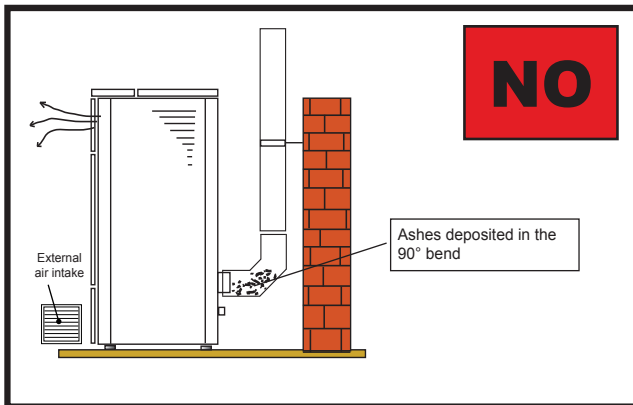
Stove installation must guarantee easy access to clean the appliance, the exhaust ducts and the chimney.

**Installation example for a stove/pellet stove**

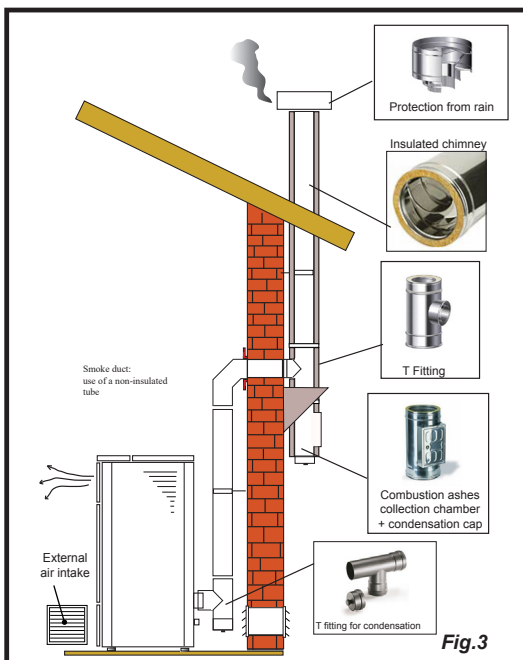


This type of installation (See Fig.1) requires an insulated chimney pot, even if the entire conduit is installed inside the building. Besides, the structure must be inserted into a properly ventilated skylight shaft.

In the lower part of the chimney pot there is an inspection cover, properly isolated from wind and rain.

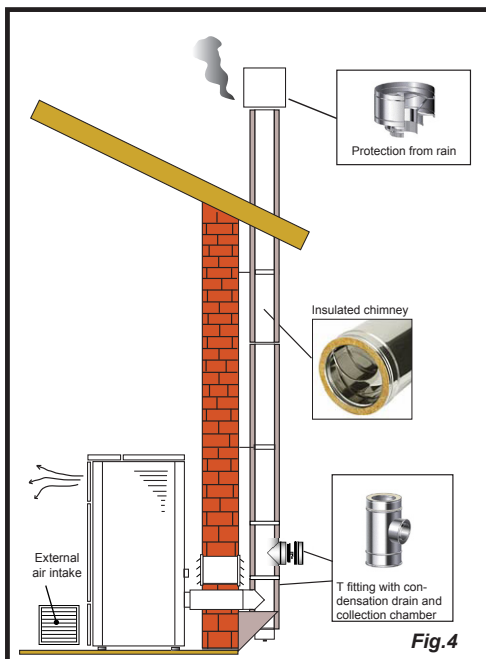


It is prohibited to install a 90° bend for the initial segment, since the ashes would quickly obstruct smoke passage, causing draught problems in the stove. (See Fig. 2)



It is possible to use an existing chimney or a shaft via ducting. For this type of installation the standards on ducted smoke evacuation systems must be complied with. In the lower part of the chimney pot, inside the home, there is a "T" type fitting installed; externally there is another one installed, so that the outside section can be inspected.

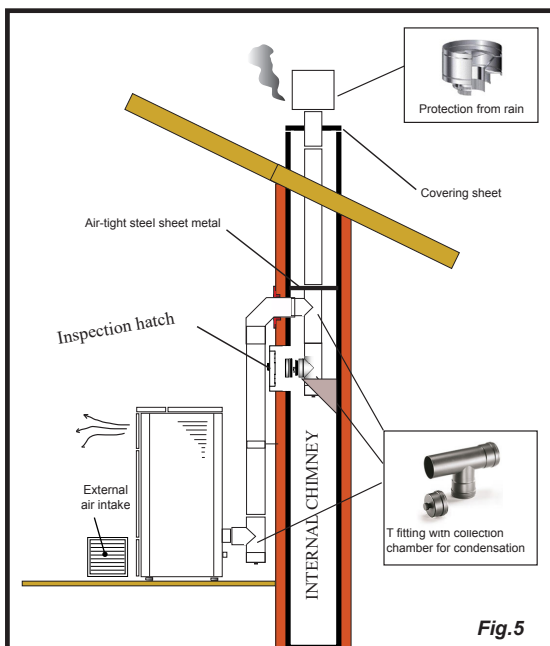
It is prohibited to install two 90° bend, since the ashes would quickly obstruct smoke passage, causing draught problems in the stove. (See Fig. 2)



This type of installation (See Fig.4) requires an insulated chimney pot, even if the entire smoke conduit is installed outside the building.

In the lower part of the chimney there is a "T" type fitting installed with inspection cap.

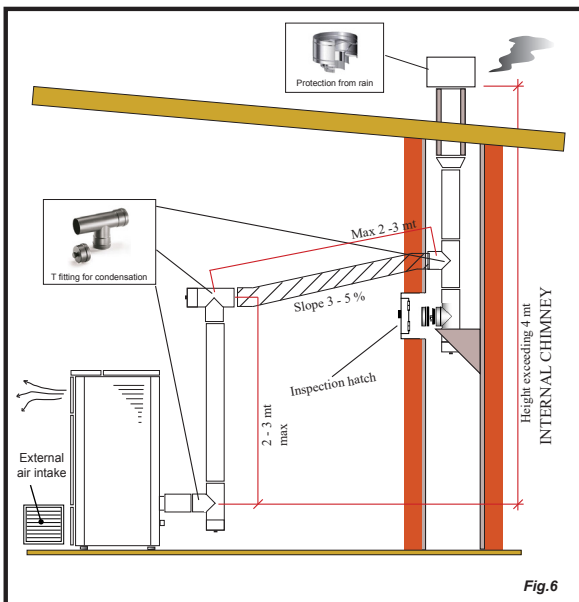
It is prohibited to install a 90° bend for the initial segment, since the ashes would quickly obstruct smoke passage, causing draught problems in the stove. (See Fig.2)



This type of installation (See Fig.5) requires an insulated chimney pot, since the entire smoke conduit is installed inside the building, and the part is located inside a pre-existing chimney pot.

In the lower part of the stove there is a "T" type fitting installed with inspection cap just like for the chimney pot.

It is prohibited to install a 90° bend for the initial segment, since the ashes would quickly obstruct smoke passage, causing draught problems in the stove. (See Fig.2)



This type of installation (See Fig.6) requires a horizontal section to connect to a pre-existing chimney pot.

Respect the slope indicated in figure, in order to reduce the ashes depositing in the horizontal tube. In the lower part of the chimney pot, there is a "T" type fitting installed with inspection cap, in the same way as the chimney pot opening.

It is prohibited to install a 90° bend for the initial segment, since the ashes would quickly obstruct smoke passage, causing draught problems in the stove. (See Fig.2)

### The Majolica cladding

The Majolica cladding is artisan-crafted and hand-finished.

For this reason there may be minor imperfections on the surface such as slight discoloration and hair cracks, which are considered characteristics that make each Majolica a unique piece.



**Since the Majolica cladding is made with a delicate material, we recommend handling it with care during cleaning and avoiding sudden impact that may cause damage.**

### Hydraulic installation

#### **! IMPORTANT**

**PLUMBING MUST ALWAYS BE CARRIED OUT BY QUALIFIED PERSONNEL, ABLE TO CARRY OUT A STATE-OF-THE-ART INSTALLATION IN COMPLIANCE WITH THE LAWS IN FORCE IN THE COUNTRY OF INSTALLATION, AFTER HAVING READ THE NEXT CHAPTER. RAVELLI DENIES ALL LIABILITIES FOR DAMAGES TO PEOPLE OR PROPERTY ARISING FROM MALFUNCTIONS DUE TO FAILURE TO COMPLY WITH THIS WARNING**

#### Safety devices for open tank system

According to the standard UNI 10412-2: 2009 in force in Italy, the systems with an open expansion tank must be equipped with:

- Open expansion tank
- Safety tube
- Loading tube
- Circulator command thermostat (excluded for natural circulation systems)
- Circulation system (excluded for natural circulation systems)
- Acoustic alarm activation device
- Acoustic alarm
- Temperature indicator
- Pressure indicator
- Automatic blocking thermal switch (blocking thermostat)

#### Safety devices for closed tank system

According to the standard UNI 10412-2: 2009 in force in Italy, closed systems must be equipped with:

- Safety valve
- Circulator command thermostat
- Acoustic alarm activation thermostat
- Temperature indicator
- Pressure indicator
- Acoustic alarm
- Automatic regulation thermal switch
- Automatic blocking thermal switch (blocking thermostat)
- Circulation system
- Expansion system
- Safety dissipation system built into the generator with thermal safety valve (self-activated), in case the the equipment is not provided with an automatic temperature regulation system.

The appliances for domestic heating with automatic feeding system must be equipped with a block thermostat for the fuel or with a cooling circuit provided by the manufacturer of the device, activated by a thermal safety valve that ensures that the compliant temperature threshold set is not exceeded. Connection between the power supply unit and the valve must be without shut-offs. Pressure upstream of the cooling circuit must at least be 1.5 bar.

#### Installation advice

After placing the boiler and installing all fume exhaust pipes, you can connect the hydraulic system. It is recommended to connect the boiler to the system by means of ball valves or gate valves, in order to enable easy detachment, if needed. Before connection we strongly recommend you carry out a thorough cleaning of the system. We recommend that you connect the vent of the safety valve through a special pipe in order to prevent damage in case of overpressure or increase in temperature.

When filling the boiler, check that the Jolly valve (picture on the left) is working properly by venting the system. The maximum Loading pressure with COLD water should be of 1 bar. In order to ensure proper operation with HOT water, the pressure in the stove should be 1.5 bar. For installation of an additional expansion tank, remember that normally 1 litre of expansion tank compensates 10 litres of the system and at least two litres are always dedicated to the water inside the stove.

#### **! IMPORTANT**

**FILLING MUST BE CARRIED OUT USING A "T" JOINT PLACED ON THE HEATING SUPPLY, LOADING TO A MAXIMUM OF 1 BAR WITH COLD WATER PERIODICALLY CHECK ON THE CONTROL CONSOLES THE PRESSURE IN THE STOVE, AND KEEP IT STEADY AT 1 BAR.**

Correctly connect the stove to the hydraulic system, bringing pressure of the system to 0.8 or max 1 bar when the stove has not yet been switched on (in the event the system is not a closed tank system, but has an open tank, it is necessary to change the setting on the menu, which is reserved to authorised technician).

Now proceed to bleed the hydraulic system using the valve assembled on the boiler or using the valves assembled on the radiators. This operation can be carried out multiple times, even after activation of the boiler since, from the time the temperature of the water starts to increase, the air bubbles move towards the high part of the boiler. Once you have completed this operation, close the feeding valve. While bleeding the boiler, ensure the electrical parts near the valve are not wet! In the event this occurs, do not turn on the boiler, but proceed to dry the electronic board using a hairdryer.

**! IMPORTANT**

THE HYDRAULIC CONNECTION PROVIDES EXCLUSIVELY THE PRESENCE OF OUR CIRCULATOR INTO THE STOVE AT SYSTEM RETURN LINE. REFER TO THE DEDICATED SECTION TO SEE HOW TO CONNECT EVERY SINGLE MODEL..

**Connections****! IMPORTANT**

The connections must be set up by a technician that is qualified and/or authorised by the Manufacturer.

**Connection with external air intake**

The stove has been designed for hermetic installations.

To make the connection with an external air intake, proceed as follows:

step	action
1	Connect a 50 mm diameter pipe to the combustion air inlet pipe at the back of the stove. <b>Note: the pipe must be no more than 2 m in length.</b>



**The air vent must be installed in such a way that it can not be blocked.**

**Chimney connection**

**The chimney must be sized so as to guarantee the draught declared by the Manufacturer.**

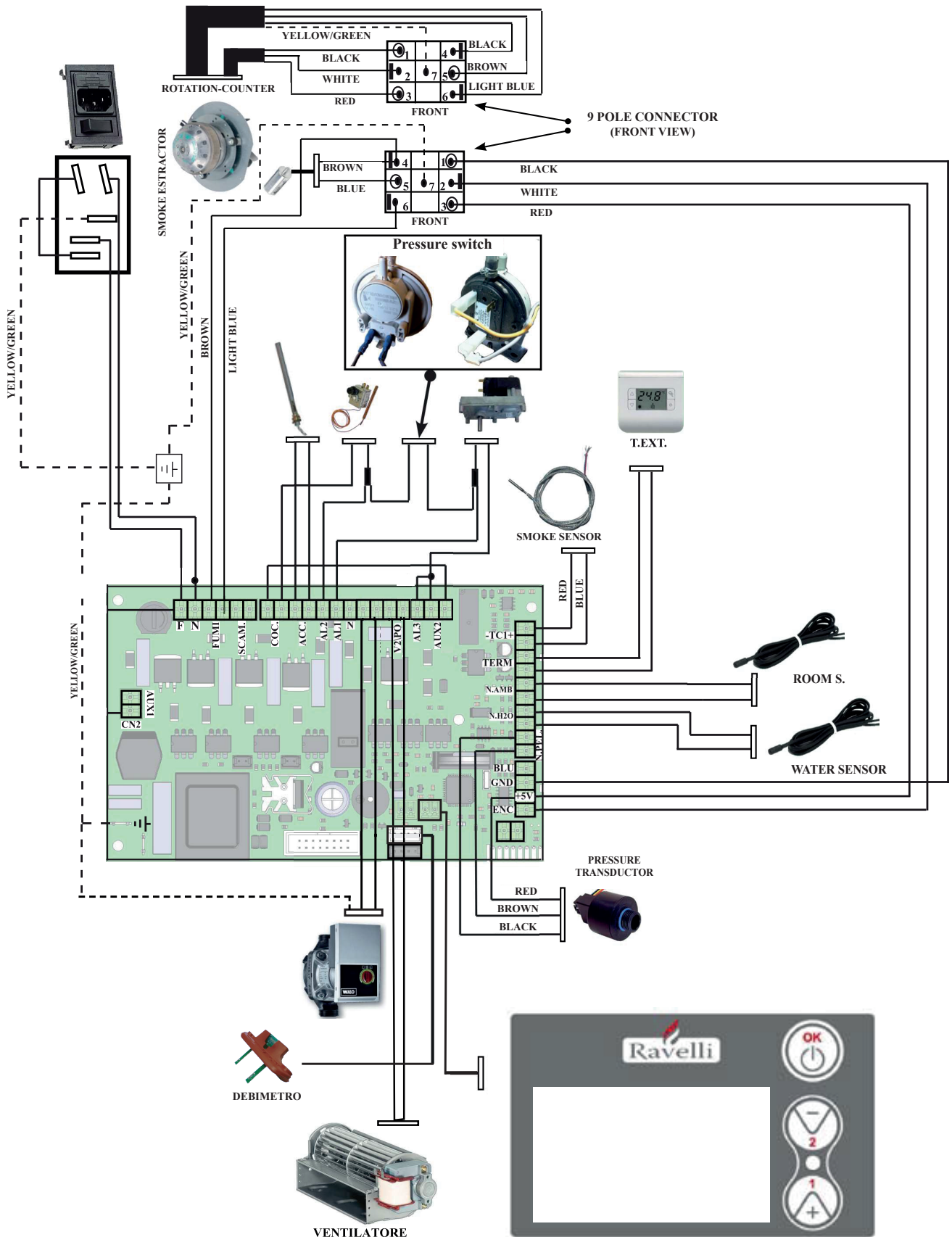
**Electrical connection**

The plug of the stove power cable must be connected only after installation and assembly has been completed of the device, and must remain accessible after installation.

To perform the electrical connection, proceed as follows:

step	action
1	Connect the power cord to the back of the stove.
2	Connect the plug of the power cord to the wall socket.

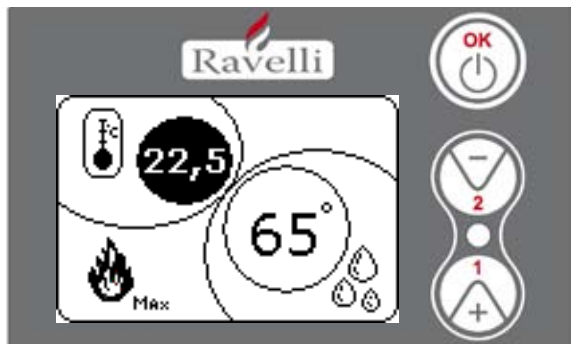
**Hrv 180 plus electrical diagram**



### Description of the commands and symbols of the display

The innovation of this particular display consists of communication via waves channelled via low voltage (12 volts) between the electronic board and the display. Communication occurs via a bipolar cable (e.g.: stereo speaker cable) and this is a novel idea because it allows the display to be installed on a wall via an optional frame standardised for electric boxes 503.

#### Display in "SAVE LIGHT" mode



Rapid display mode of room and hot water temperatures.

**Button "1"** : button to display and change "Set boiler water"

**Button "2"** : button to display and change "Set room"

**"OK" button:** Button to access the Stand-by screen or to confirm air/water set

N.B.: The SAVE LIGHT screen automatically displays when the display backlighting switches off.

#### Display in modalità "BASE"

Fig.15-A

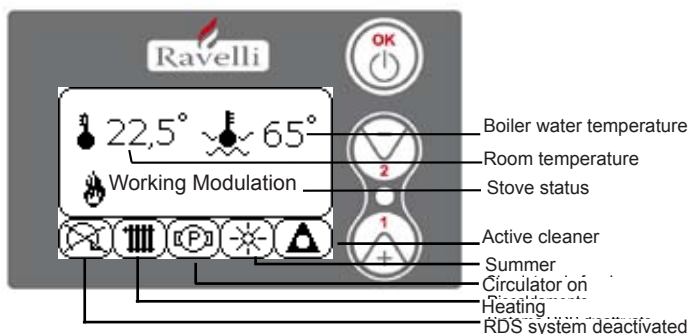
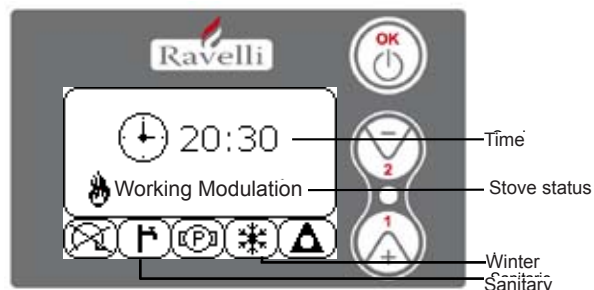


Fig.15-B



N.B.: The symbol of the cleaner is active only on the stove models with an automatic cleaner system.

**Button "1"** : button to access "Set room temp. - Set hot water temp." and regulation with keys 1 and 2.

**Button "2"** : button to access "Set power" and regulation with keys 1 and 2 (only powers which can be set are Min and Max)

**"OK" button:** - quickly press this button to confirm the temperatures set;  
- from the screen in Figure 15-A/B, quickly press the button to access the user menu;  
- also from the screen of Figure 15-A/B, press the button for 3 seconds to switch on and off the stove.

The functionalities of this display when used in "BASE" mode are:

- switching stove on and off;
- room temperature setting and selection of the type of probe (probe supplied and connected to board or display integrated probe);
- hot water temperature setting;
- working power setting (Min - Max).

#### Switching stove on and off

Before switching on the stove for the first time, follow the procedure below:

1. Insert the power supply cable.
2. Position the switch on the back of the stove to position 1.
3. Check the system is connected to the flue.
4. Load the tank with 6 mm pellets.
6. Load the screw as described in paragraph 8.6.
7. Press the OK key for 3 seconds.

At this point the stove activates the switching on phase.

The following writing appears on the display:

- SWITCH ON (waiting time varies depending on the factory parameters)
- WAITING FLAME (waiting time varies depending on the factory parameters)
- FLAME PRESENT (waiting time varies depending on the factory parameters)
- WORK (waiting time varies depending on the factory parameters)

#### Room temperature setting

Setting the room temperature is distinguished for models (HR100-200) and with ventilation (HRV120-135-160):

- stoves HR100 - HR200 with room temperature setting that manages stove modulation;
- stoves HRV120 - HRV135 - HRV160 with room temperature setting that exclusively manages ventilation regulation (see paragraph 7.3.8. "VENTILATION MENU").



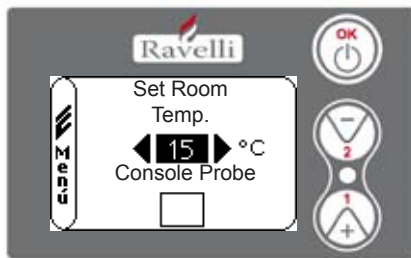


Fig.16-A

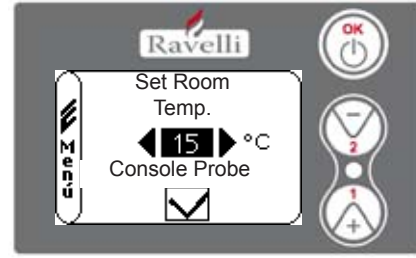


Fig.16-B

The functioning methods of the stove with a room thermostat activated are divided into 3 types:

- equipped with a room probe positioned on the rear of the stove;
- with a room probe integrated in the display;
- with an external thermostat (not supplied).

#### ROOM PROBE SUPPLIED MODE (DEFAULT USE RECOMMENDED)

If the room probe supplied is used, the display shows the room temperature.

To set the desired temperature (change the set room temperature) press key 1 to enter the specific menu and use keys 1 and 2 to regulate the desired value. Confirm using the OK key twice, keeping the box deselected (flag, see Fig. 16-A) Console Probe. On reaching the temperature on the display, the writing AIR MODULATION will show on the display. In this case, the stove will reduce pellet consumption to a minimum, reducing heating power.

#### ROOM PROBE INTEGRATED ON DISPLAY MODE

In the event you wish to install it on the wall rather than on the machine as provided by the factory, refer to the use mode with a room probe supplied mode (mode illustrated above) with one difference: the Console probe box (flag), if working in this mode, must be selected using key 2. Then confirm using the OK key (see Figure 16-B).

#### EXTERNAL THERMOSTAT MODE

If an external thermostat is used, which is correctly connected to the connector (T.EXT) placed behind the stove, the display will no longer show the room temperature, but the writing T ON (when the contact is closed), or T OFF (when the contact is open).

To enable the external thermostat, enter set water using key 1 and then tick the box T.EXT as in the figure below, twice confirming with the OK key.

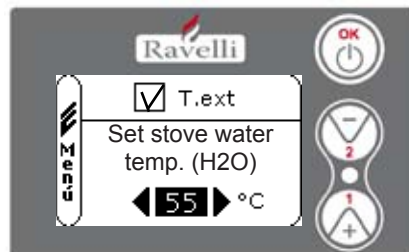


Fig.16-C

Both on models HR and HRV on reaching the temperature set on the external thermostat, the writing WORKING MODULATION will be shown on the display; in this case, the stove reduces pellet consumption to a minimum, bringing heating power to a minimum.

If the COMFORT CLIMATE mode is activated, the stove will carry out the switching off phase and automatically turn back on

**.N.B.:** It is recommended to have an external t. with OFF-SET of at least 3 °C if you want to use the COMFORT CLIMATE.

#### Setting stove water temperature

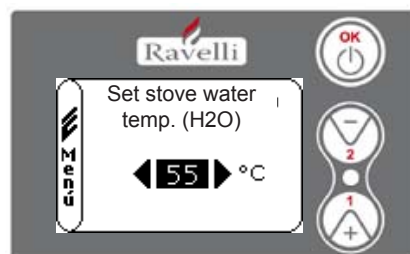


Fig.17

To set the desired temperature (change the set boiler water) press key 1 to enter the room settings menu, confirm using the OK key until the second page appears, "Set boiler water temp."; use keys 1 and 2 to regulate the desired value and confirm using the OK key again. Once the temperature is reached, the display shows the writing WATER MODULATION; in this case, the stove reduces pellet consumption to a minimum, as well as the heating power.

**N.B.:** On reaching both settings (room + water), the stove regulates itself and the writing MODULATED WORKING appears on the display.

### Working power setting

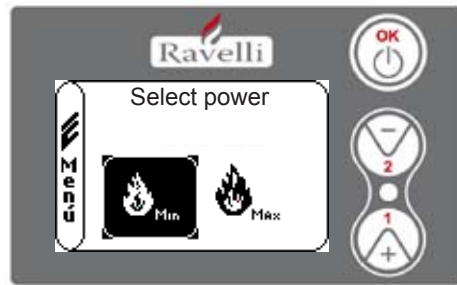


Fig.18

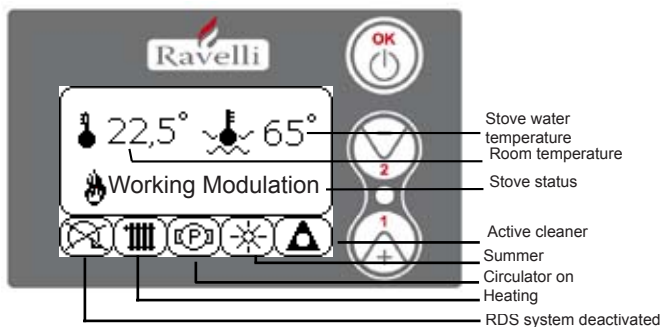
To change the working power, press key 2 to enter the specific menu and keys 1 and 2 to regulate the power desired from the two powers available and confirm using the OK key.

N.B.1: The stove will switch on each time with the maximum default power by overwriting the previous setting.

N.B.2: When the stove passes to modulation, it works on power below minimum power.

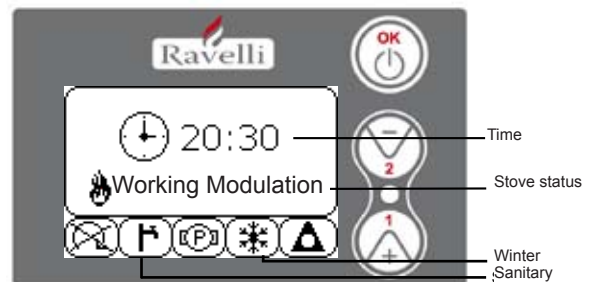
### Display in modalità "AVANZATA"

Fig.15-A



Stove water temperature  
Room temperature  
Working Modulation  
Stove status  
Active cleaner  
Summer  
Circulator on  
Heating  
RDS system deactivated

Fig.15-B



Time  
Stove status  
Winter  
Sanitary

"OK" button: access button to the complete menu and confirmation of settings chosen.

Button "1" : scroll and change settings button

Button "2" : scroll and change settings button

The stove is equipped with various functions, available in the individual programming menus. Each of these menus is accessible to the user, others are password protected, therefore only the Technical Support Centre can access them.

The three images below show the menu with all the advanced functionality icons of the stove. They are listed and illustrated individually below.

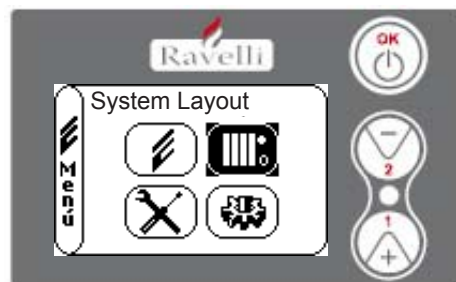


Fig.19

Use of the display in advanced mode includes the display of three main menus:

- USER MENU
- SYSTEM LAYOUT on the version IDRO\_RDS\_2.00 (password protected)
- FACTORY CALIBRATION (password protected)
- BASIC PARAMETERS (password protected)

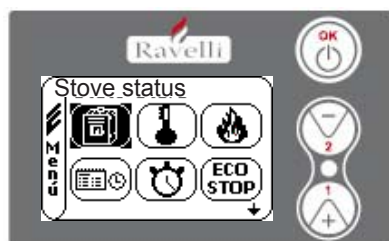


Fig.20-A

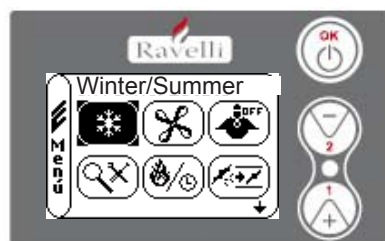


Fig.20-B



Fig.20-C

The sub-menu of the USER MENU (only one of the four menus accessible to the user) are as follows:

- STOVE STATUS menu
- ROOM SET menu
- POWER SET menu
- CLOCK menu
- CHRONO menu
- COMFORT CLIMATE menu
- WINTER/SUMMER mode
- VENTILATION mode
- SELF CONTROL SYSTEM mode
- SEE CALIBRATION menu
- SEE WORKING HOURS menu
- SET AIR/PELLETS menu
- LANGUAGE mode

## PROCEDURES FOR USE



If the chimney catches fire you must call the fire brigade immediately.

### Checks prior to start-up



You have read and perfectly understood the contents of this instructions manual.

Before lighting the stove, you must ensure that:

- the combustion chamber is clean;
- every element that could burn has been removed (instructions, various stickers).

### **! IMPORTANT**

During the first hours of use the paints used for the stove finish may release an unpleasant odour. You might also smell the typical odour of metal parts subject to high temperatures. Make sure sufficient air circulation is guaranteed in the room. These unavoidable inconveniences will disappear after the first hours of operation. To reduce your discomfort to a minimum, keep the stove on for a few hours on low power and in the beginning, do not overload it, avoiding intense heating-cooling cycles.

### **! IMPORTANT**

At the initial start-up, the paint finishes drying and hardens. Accordingly, to avoid ruining it, we advise you not to touch the stove's painted surfaces at this time.

### Recharge the fuel



Use only wood pellets, the characteristics shown in this manual.



Pellet loading must take place when the stove is off. If it is performed with the stove on, the operation must be completed within 1 minute otherwise the stove will switch off.



During pellet loading prevent the pellet bag from coming into contact with hot surfaces.

### Switching the appliance on and off

From the "stand-by" screen, it is possible to switch the stove on and off by keeping the ON / OFF button pressed on the device for a few seconds. An acoustic signal will warn you that the appliance has switched on or off. In case it is not possible using your handheld you can switch the appliance on / off using the appropriate button on the electronic board.

### **! IMPORTANT**

The brazier is mechanically cleaned before each ignition, except after the initial screw feed and in case of re-ignition after an FAILED IGNITION alarm

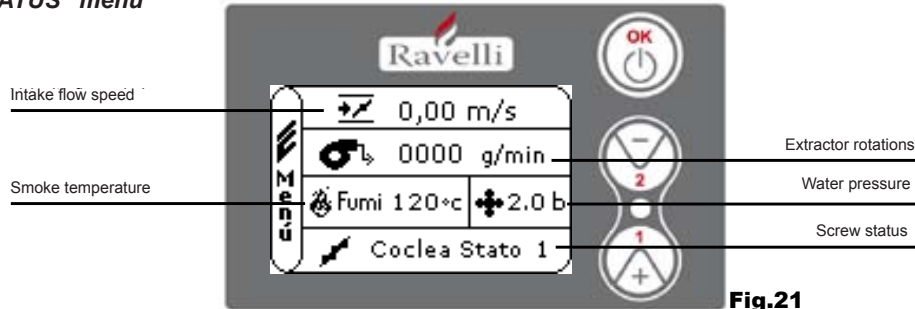


Do not switch off the heater by unplugging the plug from the wall socket.

### Failed ignition

To turn the stove back on, reset the alarm by keeping the power button on the handheld (or on the electronic card) pressed until the acoustic signal is heard and then switch on again.

It is not necessary to remove any unburnt pellets inside the brazier. In fact, as soon as the user reboots the stove, the system tries to ignite any fuel left in the brazier before starting the loading phase.

**“STOVE STATUS“ menu****Fig.21**

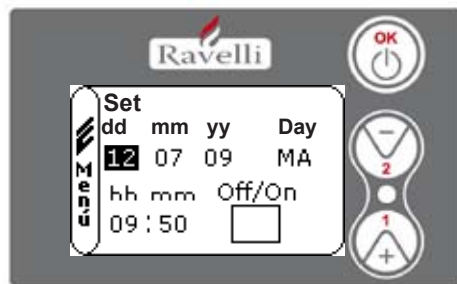
This menu allows you to verify the correct functioning of the most important components of the pellet stove and some values which distinguish their correct functioning. To access the menu, press the OK button 3 times after selecting the icon with the relevant writing “Stove Status”. This menu is used both by the Technical Support Centre to understand what is causing the malfunction and by the user at the time of loading pellets inside the hopper

**“SET ROOM and STOVE WATER“ menu**

From the status of Fig. 15-A to access the USER MENU press the OK button twice. To access the SET ROOM MENU press key 2 once and confirm with OK. Confirm with the OK key to change and SET BOILER WATER. To return to the initial screen, simultaneously press keys 1 and 2. Alternatively, it is possible to exit the menu in steps by each time pressing the OK button.

**“SET POWER“ menu**

From the status of Fig. 15-A to access the USER MENU press the OK button twice. To access the SET POWER MENU press key 2 twice and confirm with OK. To return to the initial screen, simultaneously press keys 1 and 2. Alternatively, it is possible to exit the menu in steps by each time pressing the OK button.

**“CLOCK“ menu****Fig.22**





From the status of Fig. 15-A to access the USER MENU press the OK button twice.

To access the CLOCK MENU press key 2 three times and confirm with OK. To change the settings, use the keys 1 and 2 and with each OK pressed the data is confirmed and you pass to the next step. By activating the (FLAG) ON/OFF box, the chrono function enables. On last confirmation with OK, the settings are saved and you automatically return to the icons screen. To return to the initial screen, simultaneously press keys 1 and 2. Alternatively, it is possible to exit the menu in steps by each time pressing the OK button.

**“CHRONO“ menu**

With the chronothermostat function, it is possible to program the switching on and off of the stove for each day of the week in two independent time intervals (PROGRAM 1 and PROGRAM 2).

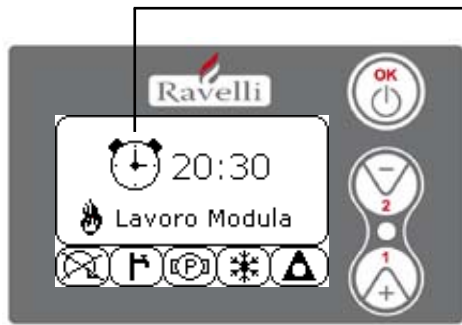
**Fig.23**

-  START: switch on time of the chrono (program1-program2)
-  STOP: switch off time of the chrono (program1-program2)
-  DAY: days in which you wish to activate the programs
-  TEMPERATURE: ideal temperature you want in the room where stove is installed during activation with the active chrono. The setting in question is overwritten by that set in manual working conditions.

From the status of Fig. 15-A to access the USER MENU press the OK button twice. To access the CHRONO menu, press key 2 four times and confirm with OK. To choose the program to implement, use keys 1 and 2; confirm with OK.

- Program1 : use keys 1 and 2 to change the settings and each time OK is pressed you confirm the data and move to the next step. press OK to confirm the data and pass to next.  
On the last confirmation with OK, the settings are saved and you go to program 2.
- Program 2: use keys 1 and 2 to change the settings and each time OK is pressed you confirm the data and move to the next step. press OK to confirm the data and pass to next.  
On last confirmation with OK, the settings are saved and you automatically return to the icons screen.

To return to the initial screen, simultaneously press keys 1 and 2. Alternatively, it is possible to exit the menu in steps by each time pressing the OK button.



**Fig.24**

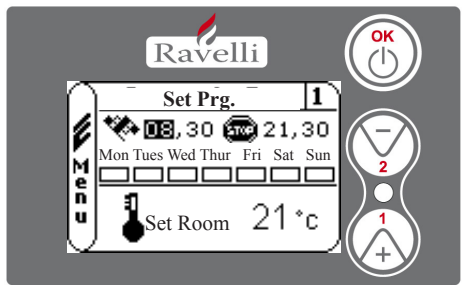
The symbol indicated signals the chrono function is active. It is however possible to program the chrono also if this is deactivated. To make it operational, refer to the chapter dedicated to clock setting.

N.B.: During the switch on phase, via the active chrono function, the thermostat starts with the maximum default power.

**DESCRIPTION OF STRINGS:**

Description	Settable values
START PROG - 1	From OFF at 23:50 in 10' steps
STOP PROG - 1	From OFF at 23:50 in 10' steps
DAY PROG - 1	Between on/off for days Monday to Sunday
SET ROOM T. PROG - 1	From EXT to MAN
START PROG - 2	From OFF at 23:50 in 10' steps
STOP PROG - 2	From OFF at 23:50 in 10' steps
DAY PROG - 2	Between on/off for days Monday to Sunday
SET ROOM T. PROG - 2	From EXT to MAN

**EXAMPLE:**



**Fig.25**

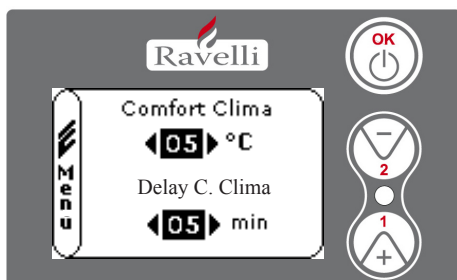
Let's assume the user wants to switch on the stove at 08:30 with switch off set to 21:30 every day of the week except the weekend (PROGRAM 1), also assuming the user wishes to set a room temp. of 21°C. The passages to implement are as follows:

- from the CHRONO MENU confirm using OK and set the program you wish to change using keys 1 and 2;
  - confirm using the OK key and pass to the time switch on setting; set the time (hh:mm) using keys 1 and 2;
  - confirm using the OK key and pass to setting the switch off time; set the time (hh:mm) using keys 1 and 2;
  - confirm using the OK key and pass to scrolling down the days of the week; use keys 1 and 2 to activate/deactivate the days you want (e.g. Monday, Tuesday, Wednesday, Thursday and Friday active);
  - confirm with the OK key and pass to choosing the desired room temperature; with keys 1 and 2 set the degrees (e.g. 20° C).
- With the stove on, when the room temperature reaches the value set, the stove passed to MODULATION or COMFORT CLIMATE

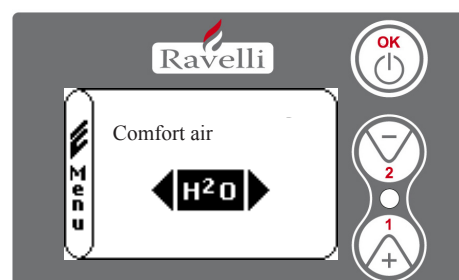
**! IMPORTANT**

**USING THIS METHOD, IT IS NECESSARY TO VERIFY THAT AFTER EACH AUTOMATIC SWITCH OFF THE GRATE IS ALWAYS VERY CLEAN TO GUARANTEE CORRECT AUTOMATIC SWITCH ON.**

**"COMFORT CLIMATE" menu**



**Fig.26-A**



**Fig.26-B**

From the status of Fig. 15-A to access the USER MENU press the OK button twice.

To access the COMFORT CLIMATE MENU, press key 2 five times and confirm with OK. To change the settings, use the keys 1 and 2 and with each OK pressed the data is confirmed and you pass to the next step.

In the second screen, it is possible to choose which management (air/water) is linked to this function

On last confirmation with OK, the settings are saved and you automatically return to the icons screen.

To return to the initial screen, simultaneously press keys 1 and 2.

Alternatively, it is possible to exit the menu in steps by each time pressing the OK button.

### “SEASON” mode

The season mode is used mainly to manage advanced layouts in the presence of a circuit with sanitary water accumulation (boiler).

In the BASIC hydraulic circuit, the SUMMER setting is not active.

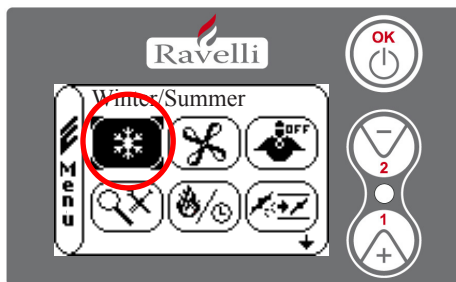


Fig.27-A

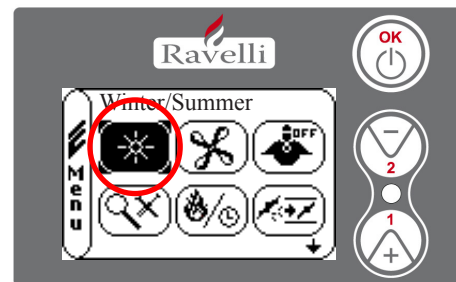


Fig.27-B

From the status of Fig. 15-A to access the USER MENU press the OK button twice.

To access the SEASON MODE, press key 2 six times. Enable or disable the function using the OK key.

To return to the initial screen, simultaneously press keys 1 and 2.

Alternatively, it is possible to exit the menu in steps by each time pressing the OK button.

### “VENTILATION” menu

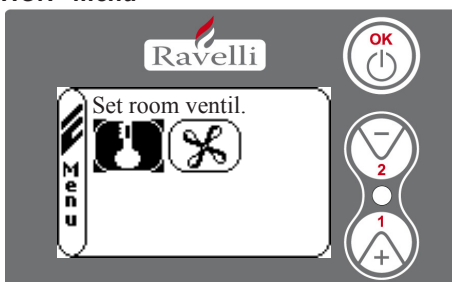


Fig.28

From the status of Fig. 15-A to access the USER MENU press the OK button twice.

To access the VENTILATION MENU press key 2 seven times and confirm with OK.

To select the function type use keys 1 and 2 and confirm with the OK key.

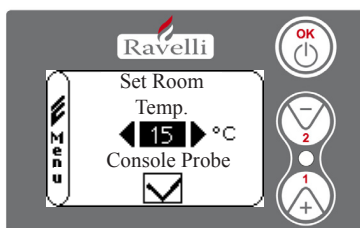


Fig.29-A

#### SET ROOM TEMPERATURE:

With ventilation active, the setting of the room function manages modulation exclusively with the air exchanger. Also in this case, the reading of the probe can be activated on the display if this is installed on the wall.

With key 1 and 2, set the desired room setting and confirm with the OK key; Activate or deactivate reading of the probe via key 1 and 2 and confirm with OK to return to the ventilation screen.

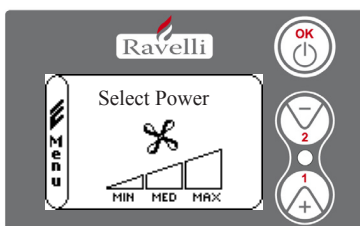


Fig.29-B

#### FAN POWER SELECTION:

With ventilation active, it is possible to set the power of the room exchanger fan; it is also possible to deactivate it bringing the speed bar to 0.

With key 1 and 2, set fan power among the 4 options:

OFF MIN MED MAX

Confirm the power selected with the OK key to return to the ventilation screen

To return to the initial screen, simultaneously press keys 1 and 2.

Alternatively, it is possible to exit the menu in steps by each time pressing the OK button.

### “SELF CONTROL SYSTEM“ mode

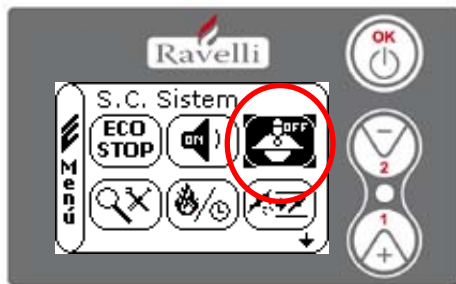


Fig.30-A

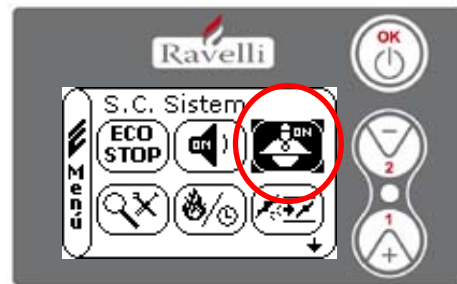


Fig.30-B

From the status of Fig. 15-A (par.7.2) to access the USER MENU press the OK button twice.

To access the S. C. SYSTEM MODE press key 2 eight times. Enable or disable the function using the OK key.

To return to the initial screen, simultaneously press keys 1 and 2.

Alternatively, it is possible to exit the menu in steps by each time pressing the OK button.

### “SEE CALIBRATION“ menu

In this menu you can verify the values of the parameters set in the electronic control panel.

This menu is used by Technical Support Centre. This menu is used by the Technical Support Centre to understand which parameters are set on the machine and therefore identify the changes to optimise stove functioning.

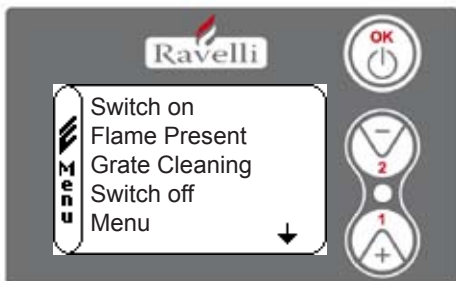


Fig.31

From the status of Fig. 15-A (par.7.2) to access the USER MENU press the OK button twice.

To access the SEE CALIBRATION MENU, press key 2 nine times. Confirm with OK to access the display of the parameters set. To scroll down the list of parameters, use buttons 1 and 2.

To return to the initial screen, simultaneously press keys 1 and 2.

Alternatively, it is possible to exit the menu in steps by each time pressing the OK button.

### “SEE WORKING HOURS“ menu

The WORKING HOURS ITEM reports the total or partial working hours and a counter of the number of stove switch ons.

It is possible that in some cases the working hours are not put back to zero, or rather they are displayed in numbers similar to 5000/15000/25000. It is the responsibility of the technician to zero these numbers during the first switch on phase. This does not mean that the stove was already working for all those hours, but simply a setting given by the program during the first inspection test by Ravelli, before the stoves are packaged and dispatched. This menu is used by Technical Support Centre. This menu is used by the Technical Support Centre to assess the overall working hours of the stove during the year and assess the need to clean it (“service hours”).

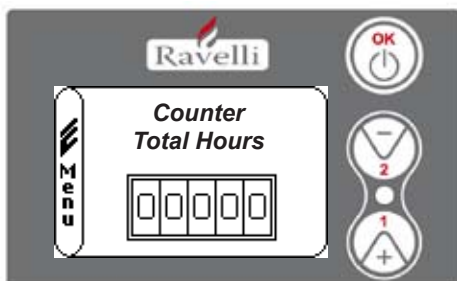


Fig.32

From the status of Fig. 15-A to access the USER MENU press the OK button twice.

To access the WORKING HOURS MENU press key 2 ten times. Confirm with OK to access the stove working hours display. To scroll the various counters (total hours, partial hours and number of switch ons) use buttons 1 and 2.

To return to the initial screen, simultaneously press keys 1 and 2.

Alternatively, it is possible to exit the menu in steps by each time pressing the OK button.

### “SET AIR/PELLETS“ menu

Setting of the air-pellet mix enables immediate variation in the quantity of air inbound of the stove and the quantity of pellets loaded on the grate. The stove is tested and inspected with DIN PLUS certified pellets. If non-certified pellets are used you may need to regulate combustion. Normally, variation is implemented on the “% FLOW” to regulate the air inbound and therefore combustion; if the flow regulation is not sufficient, it may be necessary to also vary the “% PELLETS“.

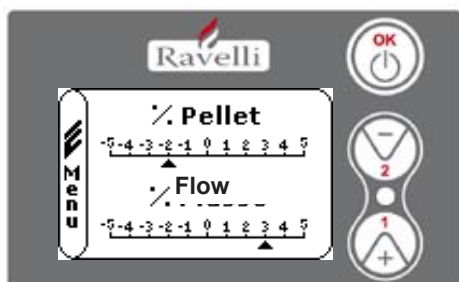


Fig.33

From the status of Fig. 15-A to access the USER MENU press the OK button twice.

To access the SEE WORKING HOURS menu, press key 2 eleven times. Confirm with OK to access regulation of the suction/pellet mix. To vary the percentage, use buttons 1 and 2 to pass from regulating the quantity of pellets to regulating the flow of air inbound. Press OK.

On last confirmation with OK, the settings are saved and you automatically return to the icons screen.

To return to the initial screen, simultaneously press keys 1 and 2.

Alternatively, it is possible to exit the menu in steps by each time pressing the OK button.

**N.B.:** the number indicated during the change of parameters refers only to a percentage value that acts on the default parameters set on the electronic board (exclusively in the working phase). These values should be changed in the event of poor combustion, due in many cases to the purchase of pellets differing from those used during stove inspection.

### “LANGUAGE“ menu



Fig.34

From the status of Fig. 15-A to access the USER MENU press the OK button twice.

To access the LANGUAGE MENU press key 2 twelve times and confirm with OK. To select the language use keys 1 and 2.

By confirming with the OK button, the settings are saved and automatically return to the icon screen.

To return to the initial screen, simultaneously press keys 1 and 2.

Alternatively, it is possible to exit the menu in steps, while keeping the OK button pressed each time.

### “SYSTEM LAYOUT“ menu(function present on the firmware from version HYDRO 2.00)



Fig.35

This function enables adaptation of the stove to the type of hydraulic system installed in the home. The options available are:

- LAYOUT 0 - functioning of direct system
- LAYOUT 1 - functioning of direct system + boiler
- LAYOUT 2 - management of accumulator (puffer)
- LAYOUT 3 - management of accumulators (boiler + puffer)

**n.b. the puffer is used by the water accumulator for heating systems, the boiler to manage water destined for sanitary use. For further information view the specific booklet on system layout.**

## Description of functions

### Modulation

During the working phase, the purpose of the stove is to reach the set boiler water temperature or set room temperature; when one of these settings is met, the thermostat passes to WORKING MODULATION, the phase in which fuel consumption is minimal.

AIR MODULATION: to reach the set room: in this case the circulator, which enables circulation of warm water, is deactivated;

WATER MODULATION: to reach the set boiler water: in this case the circulator remains on because the set room may not be met;

WORKING MODULATION: to reach both room and boiler water settings.



### Comfort climate

When the stove reaches the modulation phase, a function exists to switch off the boiler until it does not receive the request for heating again. This function is called COMFORT CLIMATE. This function can be activated in two modes according to the type of management of the sets you wish to implement AIR COMFORT CLIMATE or WATER COMFORT CLIMATE.

#### “Air” comfort climate

With the Air Comfort setting, when the room temperature is reached, the system reduces pellet consumption to a minimum by activating the modulation phase, after which the stove verifies that this temperature is maintained for a preset period of time (COMFORT DELAY usually set to 4') and if this occurs it passes automatically to ECO STOP (the stove is off).

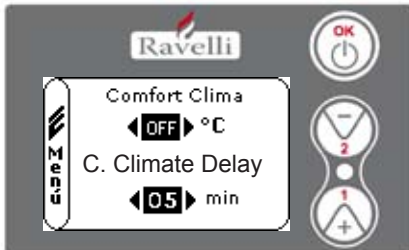


Fig.36-A

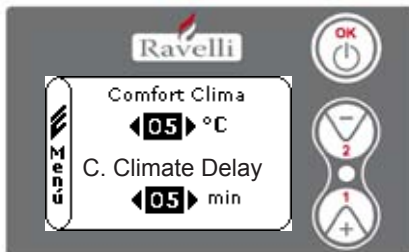


Fig.36-B

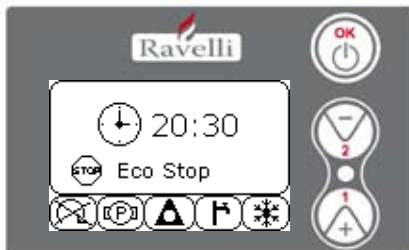


Fig.36-C

#### EXAMPLE:

To activate the Comfort Climate, set a different value to OFF using buttons 1 and 2. Confirm with OK.  
Set the time in which the machine must remain in WORKING MODULATION before passing to ECO STOP (default 4').

The value set (in this case 5°C) activated the Comfort Climate function.  
FUNCTIONING:

The value regulates the reactivation temperature of the stove.

EXAMPLE:

- set room temperature at 21°C
- comfort climate value set to 5° C

With this regulation, the stove will switch off on reaching 21°C and will switch back on when the room temperature reaches 15°C (21°C - 5 - 0.5 tolerance = circa 15°C). The display shows a sequence of strings on the left screens.

The modulation phase is activated, since the set room temperature is reached. If the temperature is maintained for the “COMFORT CLIMATE DELAY” time set, the stove passes to switch off and the display shows the writing ECO STOP. The stove remains in this status until the temperature goes below 15°C, only then will the switch on phase activate again.

#### “Water” comfort climate

To access this function. With the Water Comfort setting, when the boiler water temperature is reached, the system reduces pellet consumption to a minimum by activating the modulation phase, after which the stove verifies that this temperature is maintained for the default time set (COMFORT DELAY usually set to 4') and if this occurs it passes automatically to ECO STOP (the stove is off).  
N.B.: The switch on phase after ECO STOP is the same as that of air comfort and therefore if set at delta 5°C, when the temperature of the boiler water goes below the comfort delta set (e.g. 60°C), the stove activates at circa 54°C.

N.B.2: Stove functioning in COMFORT CLIMATE mode can start the switch on and switch off phase multiple times during the day; this may compromise resistor duration to automatically switch on the stove.

### ! IMPORTANTE

USING THIS METHOD, IT IS NECESSARY TO ENSURE THAT AFTER EACH AUTOMATIC SWITCH OFF THE GRATE IS ALWAYS VERY CLEAN TO GUARANTEE CORRECT AUTOMATIC SWITCH ON. THE CLIMATE COMFORT MODE ALSO FUNCTIONS WITH AN EXTERNAL THERMOSTAT.

#### “STAND-BY” mode

STAND-BY mode activates when the temperature of the water reaches 85 °C, this function sub-enters to protect the circuit especially when no the COMFORT CLIMATE function is active on the water. If the stove is in this condition, it automatically passes to STANDBY mode to protect the hydraulic circuit.

The stove automatically re-starts after cooling, on condition this is requested of functioning (requested from heating for water or room, sanitary request).

#### SELF CONTROL SYSTEM mode (S.C.S.)

The SELF CONTROL SYSTEM (S.C.S.) mode was designed to enable the stove to more quickly recognise any anomalies that occur. Activation is especially recommended in the event you are not in the immediate vicinity of the stove during its working phase.

#### SERVICE hours

All our models require, other than ordinary cleaning, extraordinary cleaning to carry out with the help of the installer (authorised by the manufacturer).

When the stove is being installed, the operator will set a number of working hours in keeping with the model chosen. When the time on the display expires, the message "SERVICE HOURS" will appear followed by an acoustic signal. When this message appears, contact the installer to arrange extraordinary cleaning of the stove. If the aforementioned cleaning is not carried out, this message will be displayed on each switch on without however stopping the stove from functioning.

#### Automatic loading of the screw

To automatically load the screw (when the stove is new or the screw is empty), carry out the following operations:

#### -ACCESS THE STOVE MENU

#### -PRESS KEY 2 TO ACTIVATE THE SCREW

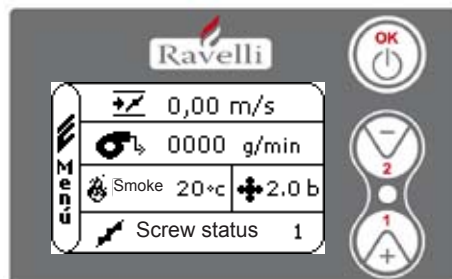


Fig.21

To return to the initial screen, simultaneously press keys 1 and 2.

Alternatively, it is possible to exit the menu in steps by pressing the OK button each time

Repeat the operation multiple times until the pellets fall into the grate.

It is possible to carry out this operation only if the stove is in FINAL CLEANING or OFF status.

### ! IMPORTANT

**BEFORE SWITCHING ON THE STOVE, ALWAYS ENSURE THE GRATE IS COMPLETELY EMPTY**

#### Operating warnings

- Switch off the stove in the event of a fault or poor functioning using the OK key.
- Do not manually place pellets in the grate.
- The accumulation of unburned pellets in the grate after repeated non-switch ons must be removed before proceeding with a new switch on.
- Never empty the content of the grate into the hopper.
- Never put fuel other than wood pellets inside the tank.
- Never switch on the stove with inflammable materials in the event of a switch on fault system.
- Under no circumstances should the power supply cable come in contact with the smoke release tube

### ! IMPORTANT

**NON-COMPLIANCE WITH THE AFOREMENTIONED RULES COULD CAUSE SERIOUS DAMAGE TO PEOPLE AND PROPERTY.**

#### Remote control

IR receiver for remote control (batteries 12 volts each. LRV08 included)



Fig.37

#### SAVE LIGHT MANAGEMENT

- **P1 - P2 Temperature regulation room** : enables setting the value of the desired room temperature from "EXT" to "MAN"
- **P4 - P5 Set H2O regulation boiler** : enables setting the boiler water
- **OK** : confirm setting or pass to screen in stand-by

#### STAND-BY OR MENU MANAGEMENT

- **OK multi-function** : pressed once, it enables access to the main menu and confirmation of the settings chosen. It is possible to exit in steps from the menu by pressing from screen to screen.
- **P1 - P4 multi-function** : enables scrolling through the icons in the various menus and changes.
- **P1 displays the temperature** : enables setting the value of the desired room temperature from "EXT" to "MAN".
- **P4 display power** : enables power regulation from Min to Max.

PHASE	DESCRIPTION
<b>FINAL CLEANING</b>	The stove is in the switch off phase and the cooling phase has not terminated
<b>SWITCH ON</b>	The spark plug pre-heating phase has started and the pellets start to fall into the grate
<b>WAITING FOR FLAME</b>	The pellets ignite and take advantage of the heat in the intake air that passes through the incandescent resistor duct
<b>FLAME PRESENT</b>	The flame is visible in the grate
<b>WORKING</b>	The stove has terminated the switching on phase: it is possible to change the working power
<b>Air/water MODULATION</b>	The set room temperature/set boiler water temperature has been reached.
<b>ECO STOP</b>	Comfort Climate activated, set room temperature reached (air) or the set boiler water temperature has been reached (water). The stove is off
<b>T ON / T OFF</b>	The room probe was shut off or an external thermostat was connected
<b>FAN WAITING START</b>	The stove is in the cooling phase: having reached this condition, it starts automatically
<b>FAN WAITING RE-START</b>	The stove is in the cooling phase: having reached this condition, it automatically re-starts
<b>WAITING SWITCH ON RE-START</b>	The phase has activated for hot re-start. Functioning is similar to the SWITCH ON phase
<b>HOT SMOKE</b>	The maximum threshold was reached: to cool, the stove goes to minimum until there is less smoke
<b>Water STAND-BY</b>	The water temperature has reached 85 °C. The stove passes automatically to STAND-BY mode to guarantee protection of the hydraulic circuit.
<b>OFF</b>	The stove is off
<b>Switching on or Waiting Flame PELLETS FINISHED</b>	When the request to switch on in ECO-STOP status overlaps with a condition of automatic switch off (using the TIMER), the stove switches on to ensure total cleaning of the basket before passing to FINAL CLEANING
<b>EXCESS LOAD</b>	When the pellet setting (set pellets +5) is near the continuous load condition.

## ! IMPORTANT

IF THE "HOT SMOKE" SIGNAL IS DISPLAYED, IT MEANS THERE ARE COMBUSTION PROBLEMS. YOU MUST CONTACT YOUR LOCAL TECHNICAL SUPPORT CENTRE FOR AN INSPECTION.

### Description of alarms

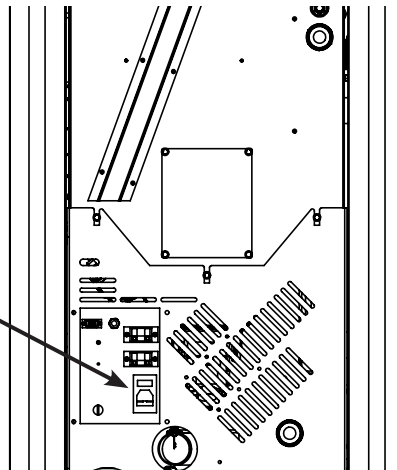
SIGNALLING	REASON	SOLUTION
<b>ALARM 06 PELLETS USED UP</b>	• The pellet tank is empty	• Check there are pellets inside the tank
	• The gear motor is not loading pellets	• Empty the tank and check nothing fell in that could block the correct functioning of the screw
	• Not enough pellets loaded	• Regulate the pellet setting
		• <b>If the problem persists, contact your local Technical Support Centre.</b>
<b>ALARM 01 BLACK - OUT</b>	• No voltage during working phase	• Press the switch off key and switch on stove again
		• <b>If the problem persists, contact your local technical support centre</b>
<b>ALARM 05 NO SWITCH ON</b>	• The pellet tank is empty	• Check there are pellets inside the tank
	• Pellet calibration and suction in switch on phase inadequate	• <b>Contact your local Technical Support Centre</b>
	• The switch on resistor is faulty or not in position.	• <b>Contact your local Technical Support Centre</b>
<b>ALARM 11 FLAME ANOMALY</b>	• The pellet tank is empty	• Check there are pellets inside the tank
	• Pellet calibration and suction in switch on phase inadequate	• <b>Contact your local Technical Support Centre</b>
<b>ALARM 12 RO- TATION ANOMALY OF EXTRACTOR</b>	• The smoke extractor rotations have an efficiency loss of 15% due to fan obstruction	• <b>Contact your local Technical Support Centre</b>
<b>ALARM 04 EXTRACTOR</b>	• Smoke extractor encoder not working or not properly connected	• <b>Contact your local Technical Support Centre</b>
	• No power to smoke extractor	• <b>Contact your local Technical Support Centre</b>
	• The smoke extractor is blocked	• <b>Contact your local Technical Support Centre</b>

<b>ALARM 08 DEPRESSION</b>	• The combustion chamber is dirty	• Carry out as indicated in the specific cleaning booklet for the stove
	• The flue is blocked	• Check the flue is free and clean
	• The vacuum meter is malfunctioning	• <b>Contact your local Technical Support Centre</b>
<b>ALARM 07 THERMAL SWITCH</b>	• The manual reset thermostat activated	• Reset the thermostat by pressing the button on the back of the stove (see Fig. in below)
	• The centrifugal fan is faulty	• <b>Contact your local Technical Support Centre</b>
	• Combustion in the grate is not optimal	• Switch off the stove, clean the grate and regulate combustion with the pellet setting. • <b>If the problem persists, contact your local Technical Support Centre.</b>
<b>ALARM 03 SMOKE TEMP.</b>	• Combustion in the grate is not optimal	• Switch off the stove, clean the grate and regulate combustion with the pellet setting.
	• The centrifugal fan is faulty	• <b>Contact your local Technical Support Centre</b>
		• <b>If the problem persists, contact your local Technical Support Centre.</b>
<b>ALARM 02 SMOKE PROBE</b>	The smoke probe is malfunctioning	• <b>Contact your local Technical Support Centre</b>
	The smoke probe is disconnected from the board	• <b>Contact your local Technical Support Centre</b> • <b>If the problem persists, contact your local Technical Support Centre.</b>
<b>ALARM 16 PRESSURE</b>	System pressure is greater or less than the default value (which ranges from 0.5 bar to 2.5 bar). Cold circuit pressure is recommended at circa 1.0 bar	• Fill the system or vent to bring pressure to the value requested for correct functioning • <b>If the problem persists, contact your local technical support centre</b>
<b>ALARM 10 HOT WATER</b>	If the boiler water temperature exceeds 90 °C.	• <b>Contact your local TS centre</b> if the alarm persists
<b>ALARM 14 SCREW PHASE</b>	• No cable connection to power the gear motor screw	• <b>Contact your local Technical Support Centre</b>
<b>ALARM 15 SCREW TRIAC</b>	• An anomaly has occurred on an internal component on the electronic board which manages the pellet loading screw	• <b>Contact your local Technical Support Centre</b>
<b>ALARM 13 INSUFFICIENT FLOW</b>	• The door and the ash box are not closed correctly	• Check they are correctly closed
	• Poor combustion in grate	• Switch off the stove, clean the grate, its rest area and regulate combustion with the pellets/air setting.
	• Presence of foreign body in air intake tube	• Check if present and remove foreign body • <b>If the problem persists, contact your local Technical Support Centre.</b>
<b>ALARM 17 DIRT AIR FLOW METER</b>	• The device that reads the quantity of air intake may be dirty and as a result cannot read correctly	• <b>Contact your local Technical Support Centre</b>
<b>ALARM 09 FAULT AIR FLOW METER</b>	• The device may be disconnected or faulty	• <b>Contact your local Technical Support Centre</b>

## ! IMPORTANT

EACH ALARM CAUSES THE IMMEDIATE SWITCHING OFF OF THE STOVE. PRESS KEY 3 ON THE DISPLAY, THE ALARM CAN BE RESET.

Position of the switch, protected by the screw cap, for the safety reset thermostat on the back of the stove.



## MAINTENANCE

### Safety warnings for maintenance



Maintenance of the stove must be performed at least once a year and should be planned in advance with the Technical Assistance Service.



In some conditions, such as turning the stove on and off or inappropriate use, the combustion products can contain small soot particles that build up in the smoke evacuation system. This can reduce the cross-section of the smoke duct and pose a fire risk.

The smoke evacuation system must be inspected and cleaned at least once a year.



The maintenance operations must be carried out when the stove is cold and with the electrical power supply disconnected.

Before completing any maintenance operation, adopt the following precautions:

- Make sure that all stove parts are cold.
- Make sure that the ashes are completely cold.
- Always operate with equipment that is appropriate for maintenance.
- When maintenance is finished, re-install all of the dis-assembled parts before restarting operation.

### **! IMPORTANT**

The quality of the pellet, the stove operating mode and combustion control can affect maintenance activity frequency.

### Cleaning

### **! IMPORTANT**

Perform the cleaning operations so as to guarantee correct stove operation. The table below lists the necessary cleaning operations required for correct stove operation.

PARTS / FREQUENCY	1 DAY	2-3 DAYS	60-90 DAYS
Combustion chamber	●		
Combustion grille	●		
Ash drawer	●		
Glass		●	
Extraction duct			●

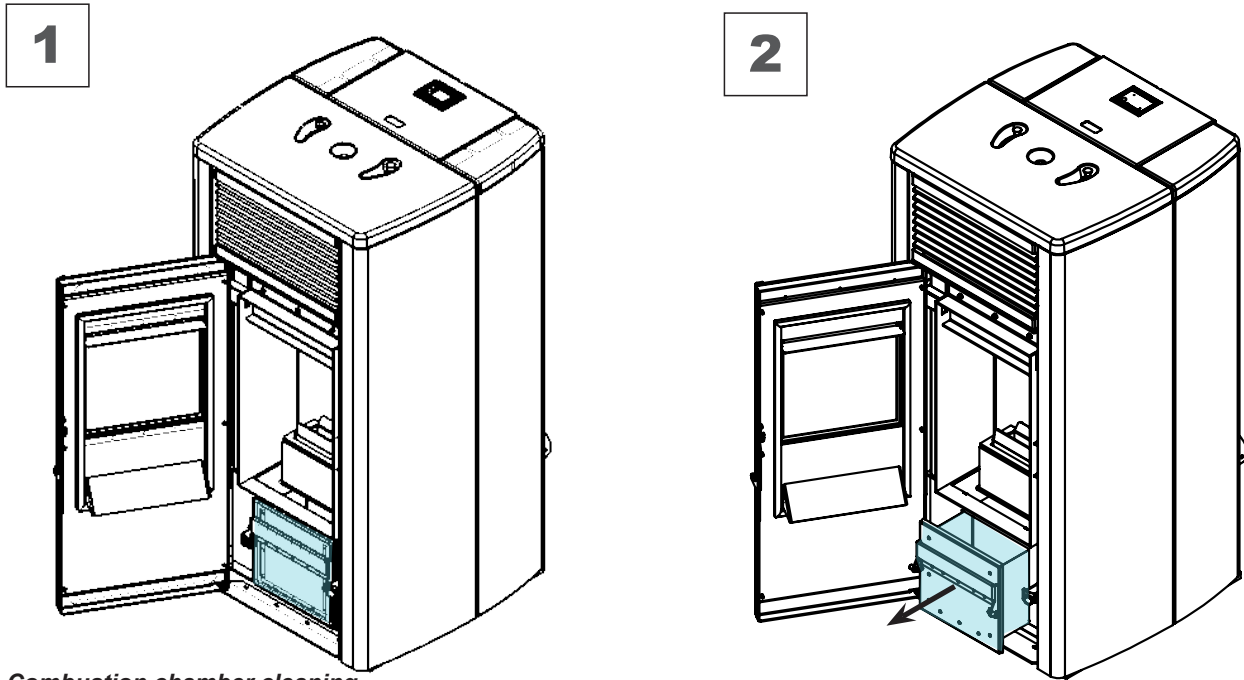
### Glass cleaning

With a cold stove, clean the glass with a cloth and glass cleaner.

Note: there are stove glass cleaning products available on the market.

### Cleaning the ash drawer

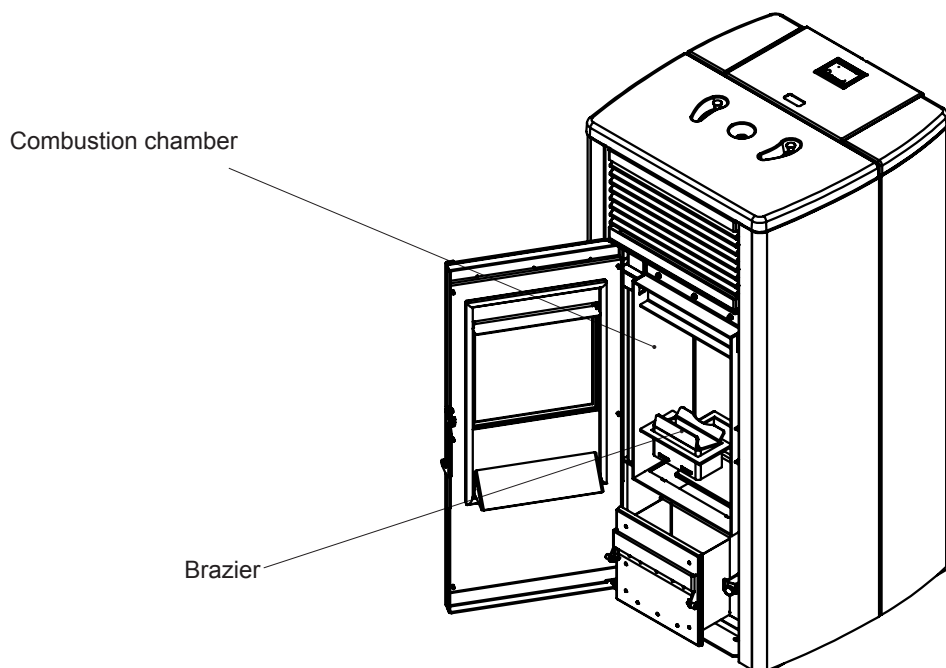
The ash drawer must be cleaned every 30 days, (depending on the amount of time the stove is used and what type of pellet is used). To clean the ash drawer, proceed as follows:



### Combustion chamber cleaning

To clean the ash drawer, proceed as follows:

step	action
1	The stove requires a simple yet frequent cleaning in order to guarantee suitable yield and regular operation. Vacuum the combustion chamber every day using a bin ash vacuum, making sure that the ashes are completely cold.



### Cleaning the pellet tank

To clean the pellet tank, proceed as follows:

step	action
1	Periodically remove the wood sawdust accumulated on the bottom of the tank, using a vacuum cleaner.

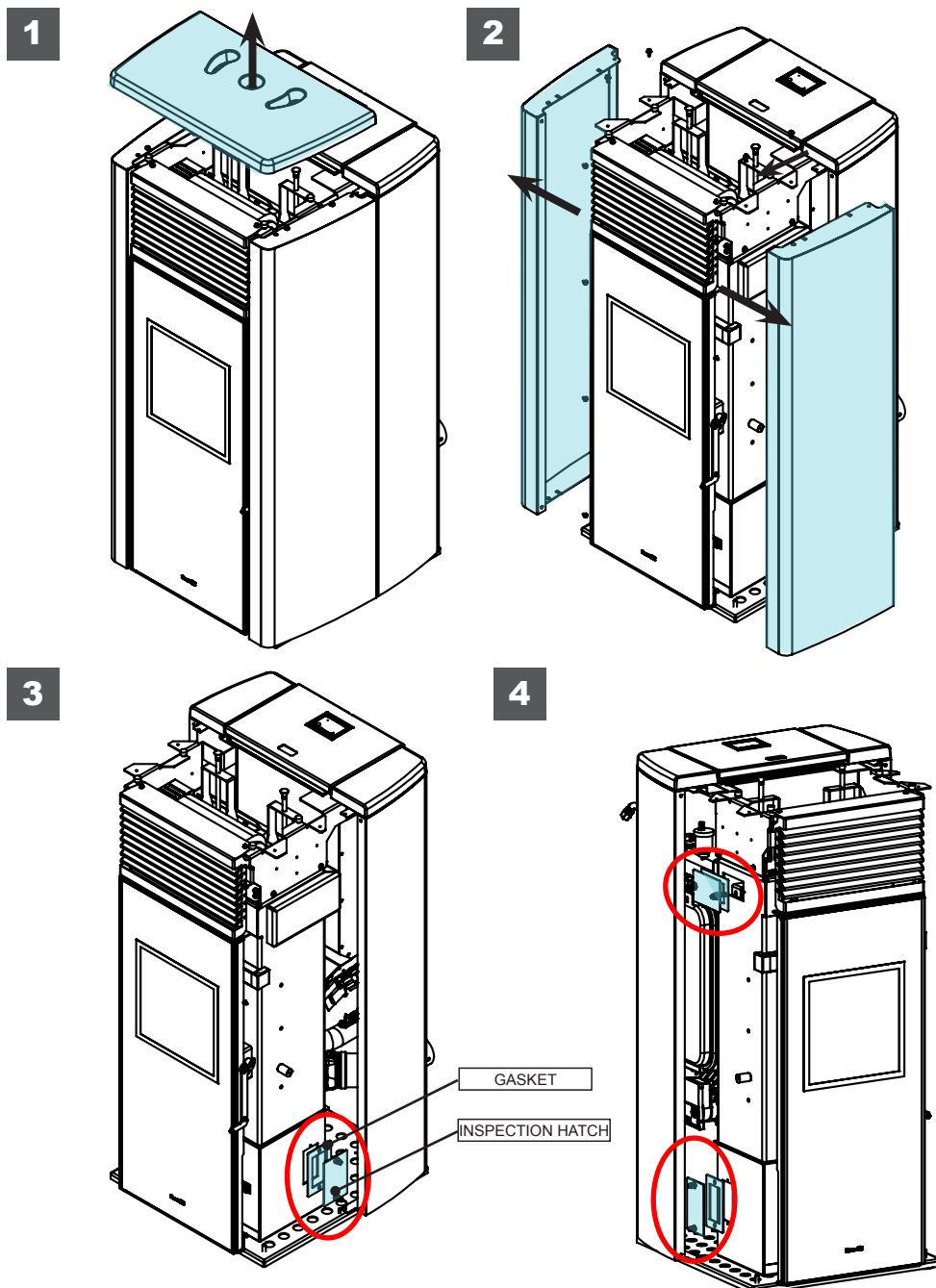
### Smoke conduit cleaning

#### **! IMPORTANT**

This operation must be carried out by a Ravelli Assistance Centre.  
 Schedule this type of cleaning with the Ravelli Assistance Centre.  
 The smoke conduit must be cleaned every 3 months.

step	action
1	Open the hatches.
2	Clean the ashes, eventually use a brush or similar and reassemble everything. Note: the hatches are equipped with gaskets, therefore, before reassembling them, make sure that the gaskets are not worn.

**Note:** The operation must be carried out with a cold stove, using an ash-type aspirator.



**Extraordinary maintenance**

Extraordinary maintenance activities must be carried out by staff from the Authorised Assistance Centre.



Do not wait for components to be deteriorated by use before proceeding with their replacement. Replace a worn component before it is completely broken to prevent any damage caused by sudden component breakage.

PARTS / FREQUENCY	60- 90 DAYS	1 SEASON
Deep combustion chamber cleaning	•	
Door gasket		•
Chimney		•

Schedule the above extraordinary maintenance activities with the Authorised Assistance Centre.

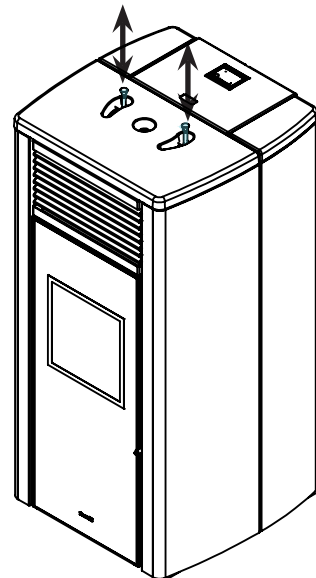
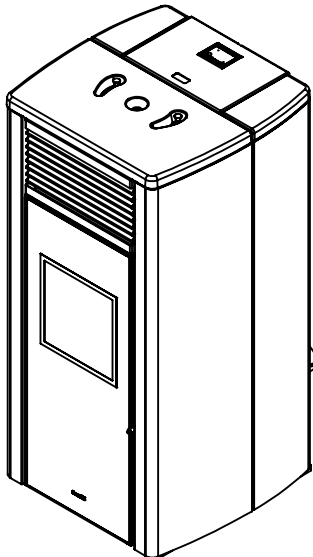
**Deep combustion chamber cleaning****! IMPORTANT**

This operation must be carried out by a Ravelli Assistance Centre.  
Schedule this type of cleaning with the Ravelli Assistance Centre.

To clean the combustion chamber, proceed as follows:

**Cleaning the tube heat exchanger:**

During operation, dust and soot are deposited on the surface of the heat exchanger tubes. To ensure smooth operation throughout the season, it is advisable to periodically clean the heat exchanger when the stove is cold. Using the cold handle, extract the scraper rod and firmly move the scraper back and forth.





## STORAGE AND DISPOSAL

### *Disposal*

Demolition and disposal of the stove is under the exclusive liability and responsibility of the owner who must do so in accordance with the laws in force in the country of installation pertaining to safety, respect and protection of the environment.

At the end of its service life, the product must not be disposed of as household waste. It can be taken to designated separate waste collection centres run by local administrations or to dealers who offer this service.

Disposing of the product as sorted waste avoids any negative consequences on the environment and health deriving from unsuitable disposal and it recovers the materials that the stove is composed of in order to save considerable energy and resources.

## TROUBLESHOOTING

### *The stove does not work*

- closely follow the directions in the dedicated chapter of this manual.
- make sure that the air intake duct is not obstructed;
- make sure that the smoke evacuation system is clean and not obstructed;
- make sure the chimney is sized for the stove power;
- make sure that the air intake in the room is clear of any obstructions and that there are no other combustion appliances or extraction hoods that create a vacuum in the room;

### *Difficult lighting*

- closely follow the directions in the dedicated chapter of this manual;
- make sure that the air intake duct is not obstructed;
- make sure that the smoke evacuation system is clean and not obstructed;
- make sure the chimney is sized for the stove power.
- make sure that the air intake in the room is clear of any obstructions and that there are no other combustion appliances or extraction hoods creating a vacuum in the room.

### *Smoke leakage*

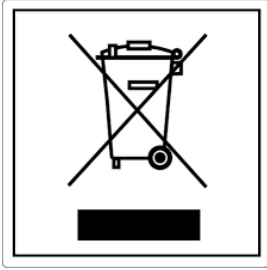
- Check the draught of the chimney.
- Check whether the seals on the door, drawer and smoke evacuation system are intact.
- Make sure there is no ash obstructing the primary air flow grille.

### *The glass gets dirty easily*

- Only use recommended fuels.
- Check the draught of the chimney.
- 

### *Downtime (end of season)*

At the end of every season we recommend vacuuming out any ash and dust that may still be inside. It is advisable to let the pellets burn out in the tank so that the pellet remains and sawdust can be vacuumed from the bottom and from the screw.



#### **ITA-Informationi per la gestione di rifiuti di apparecchiature elettriche ed elettroniche contenenti pile e accumulatori**

Questo simbolo che appare sul prodotto, sulle pile, sugli accumulatori oppure sulla loro confezione o sulla loro documentazione, indica che il prodotto e le pile o gli accumulatori inclusi al termine del ciclo di vita utile non devono essere raccolti, recuperati o smaltiti assieme ai rifiuti domestici.

Una gestione impropria dei rifiuti di apparecchiature elettriche ed elettroniche, di pile o accumulatori può causare il rilascio di sostanze pericolose contenute nei prodotti. Allo scopo di evitare eventuali danni all'ambiente o alla salute, si invita l'utilizzatore a separare questa apparecchiatura, e/o le pile o accumulatori inclusi, da altri tipi di rifiuti e di consegnarla al centro comunale di raccolta. È possibile richiedere al distributore il ritiro del rifiuto di apparecchiatura elettrica ed elettronica alle condizioni e secondo le modalità previste dal D.Lgs. 49/2014.

La raccolta separata e il corretto trattamento delle apparecchiature elettriche ed elettroniche, delle pile e degli accumulatori favoriscono la conservazione delle risorse naturali, il rispetto dell'ambiente e assicurano la tutela

della salute.

Per ulteriori informazioni sui centri di raccolta dei rifiuti di apparecchiature elettriche ed elettroniche, di pile e accumulatori è necessario rivolgersi alle Autorità pubbliche competenti al rilascio delle autorizzazioni.

#### **ENG-Information for management of electric and electronic appliance waste containing batteries or accumulators**

This symbol, which is used on the product, batteries, accumulators or on the packaging or documents, means that at the end of its useful life, this product, the batteries and the accumulators included must not be collected, recycled or disposed of together with domestic waste.

Improper management of electric or electronic waste or batteries or accumulators can lead to the leakage of hazardous substances contained in the product. For the purpose of preventing damage to health or the environment, users are kindly asked to separate this equipment and/or batteries or accumulators included from other types of waste and to arrange for disposal by the municipal waste service. It is possible to ask your local dealer to collect the waste electric or electronic appliance under the conditions and following the methods provided by national laws transposing the Directive 2012/19/EU.

Separate waste collection and recycling of unused electric and electronic equipment, batteries and accumulators helps to save natural resources and to guarantee that this waste is processed in a manner that is safe for health and the environment.

For more information about how to collect electric and electronic equipment and appliances, batteries and accumulators, please contact your local Council or Public Authority competent to issue the relevant permits.

#### **FRA-Informations relatives à la gestion des déchets d'appareils électriques et électroniques contenant des piles et des accumulateurs**

Ce symbole présent sur le produit, sur les piles, sur les accumulateurs, sur l'emballage ou sur la documentation de référence, indique que le produit et les piles ou les accumulateurs ne doivent pas être collectés, récupérés ou éliminés avec les déchets domestiques au terme de leur vie utile.

Une gestion impropre des déchets d'équipements électriques et électroniques, des piles ou des accumulateurs peut causer la libération de substances dangereuses contenues dans les produits. Pour éviter d'éventuelles atteintes à l'environnement ou à la santé, on invite l'utilisateur à séparer cet appareil, et / ou les piles ou les accumulateurs, des autres types de déchets et de le confier au service municipal de collecte. On peut demander au distributeur de prélever le déchet d'appareil électrique ou électronique aux conditions et suivant les modalités prévues par les normes nationales de transposition de la Directive 2012/19/UE.

La collecte sélective et le traitement correct des appareils électriques et électroniques, des piles et des accumulateurs, favorisent la conservation des ressources naturelles, le respect de l'environnement et assurent la protection de la santé.

Pour tout renseignement complémentaire sur les modalités de collecte des déchets d'appareils électriques et électroniques, des piles et des accumulateurs, il faut s'adresser aux Communes ou aux Autorités publiques compétentes pour la délivrance des autorisations.

#### **NLD-Informatie voor het beheer van afgedankte elektrische en elektronische apparatuur die batterijen en accu's bevat**

Dit symbool, dat op het product, op batterijen, op accu's, op de verpakking of in de documentatie ervan staat, geeft aan dat het product en de batterijen of accu's aan het einde van de gebruiksduur niet samen met het huishoudelijke afval mogen worden ingezameld of verwijderd.

Een onjuist beheer van afgedankte elektrische en elektronische apparatuur, batterijen of accu's kan leiden tot het vrijkomen van gevaarlijke stoffen in de producten. Om schade aan het milieu of aan de gezondheid te voorkomen, wordt de gebruiker aangemoedigd om deze apparatuur en/of de meegeleverde batterijen of accu's van andere soorten afval te scheiden en af te leveren aan de gemeentelijke ophaaldienst. Het is mogelijk om de distributeur te vragen om de afvalinzameling van elektrische en elektronische apparatuur uit te voeren volgens de voorwaarden en de voorschriften die zijn vastgelegd in de nationale bepalingen ter uitvoering van Richtlijn 2012/19/EU.

De gescheiden inzameling en correcte behandeling van elektrische en elektronische apparatuur, batterijen en accu's bevorderen het behoud van natuurlijke hulpbronnen, respect voor het milieu en zorgen voor de bescherming van de gezondheid.

Voor meer informatie over de inzameling van afgedankte elektrische en elektronische apparatuur, batterijen en accu's is het noodzakelijk om contact op te nemen met de gemeenten of de bevoegde overheidsinstanties.

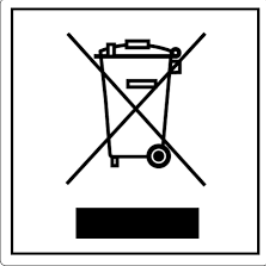
#### **DEU-Informationen für die Entsorgung von elektrischen und elektronischen Altgeräten, die Batterien und Akkus enthalten**

Dieses Symbol auf dem Produkt, auf den Batterien, auf den Akkus, auf deren Verpackung oder in deren Unterlagen weist darauf hin, dass das Produkt und die Batterien oder Akkus am Ende ihrer Lebensdauer nicht zusammen mit dem normalen Hausmüll gesammelt, verwertet oder entsorgt werden dürfen.

Eine unsachgemäße Entsorgung von elektrischen und elektronischen Altgeräten, sowie von Batterien oder Akkus kann zur Freisetzung gefährlicher Stoffe im Produkt führen. Um mögliche Umwelt- oder Gesundheitsschäden zu vermeiden, wird der Benutzer aufgefordert, dieses Gerät bzw. die Batterien oder Akkus von anderen Abfallarten zu trennen und der kommunalen Sammelstelle zu übergeben. Außerdem ist es möglich, den Händler um die Rücknahme der elektrischen und elektronischen Altgeräte unter den in den nationalen Vorschriften zur Umsetzung der Richtlinie 2012/19/EU vorgesehenen Bedingungen zu bitten.

Die getrennte Sammlung und die ordnungsgemäße Verwertung von elektrischen und elektronischen Altgeräten, Batterien und Akkus fördert die Erhaltung der natürlichen Ressourcen, respektiert die Umwelt und gewährleistet den Schutz der Gesundheit.

Für weitere Informationen zur Sammlung von elektrischen und elektronischen Altgeräten, Batterien und Akkus wenden Sie sich bitte an die für die Erteilung von Genehmigungen zuständigen Kommunen oder Behörden.



### ESP-Información para la gestión de residuos de aparatos eléctricos y electrónicos con pilas y acumuladores

Este símbolo que aparece en el producto, en las pilas, los acumuladores o en su embalaje o su documentación indica que el producto y las pilas o acumuladores que contiene, al final de su vida útil, no deben recogerse, recuperarse o desecharse junto con los residuos domésticos.

Una gestión inadecuada de los residuos de aparatos eléctricos y electrónicos, pilas o acumuladores podría provocar la liberación de sustancias peligrosas contenidas en los productos. Para evitar posibles daños para el medio ambiente o la salud, se recomienda al usuario que separe este aparato y/o las pilas o acumuladores que contiene de otros tipos de residuos y lo entregue al servicio municipal encargado de la recogida. Se puede solicitar al distribuidor la recogida de los residuos de aparatos eléctricos y electrónicos en las condiciones y de acuerdo con las modalidades establecidas por las normas nacionales de transposición de la Directiva 2012/19/UE.

La recogida diferenciada y el tratamiento correcto de los aparatos eléctricos y electrónicos, de las pilas y los acumuladores favorecen la conservación de los recursos naturales, el respeto del medio ambiente y garantizan la protección de la salud.

Para obtener más información sobre las modalidades de recogida de los residuos de aparatos eléctricos y electrónicos, de las pilas y los acumuladores es necesario acudir a los ayuntamientos o las autoridades públicas competentes para la concesión de autorizaciones.

### PRT-Informações sobre a gestão dos resíduos de equipamentos elétricos e eletrônicos contendo pilhas e acumuladores

Este símbolo no produto, pilhas, acumuladores ou respetiva embalagem ou documentação indica que, no final do seu ciclo de vida útil, o produto e as pilhas ou acumuladores incluídos não devem ser recolhidos, recuperados nem eliminados conjuntamente com o lixo doméstico.

Uma gestão imprópria dos resíduos de equipamentos elétricos e eletrônicos, pilhas ou acumuladores pode causar a libertação de substâncias perigosas contidas nos produtos. A fim de evitar eventuais danos para o ambiente ou para a saúde, o utilizador é convidado a separar este equipamento e/ou pilhas ou acumuladores incluídos de outros tipos de resíduos e a depositá-los no serviço municipal de recolha de lixo. É possível requisitar a recolha dos resíduos de equipamentos elétricos e eletrônicos pelo distribuidor segundo as condições e modalidades previstas pelas normas nacionais de transposição da diretiva 2012/19/UE.

A recolha separada e o correto tratamento dos equipamentos elétricos e eletrônicos e respetivas pilhas e acumuladores favorecem a conservação dos recursos naturais, o respeito do ambiente e a proteção da saúde.

Para mais informações sobre as modalidades de recolha dos resíduos de equipamentos elétricos e eletrônicos, pilhas e acumuladores, dirija-se à sua Câmara Municipal ou à autoridade pública competente para a emissão das autorizações.

### GRC-Πληροφορίες για τη διαχείριση αποβλήτων ηλεκτρικού και ηλεκτρονικού εξοπλισμού, μπαταριών και συσσωρευτών

Αυτό το σύμβολο που εμφανίζεται στο προϊόν, στις μπαταρίες, στους συσσωρευτές στη συσκευασία ή στα έγγραφα υποδεικνύει ότι το προϊόν στο τέλος της ωφέλιμης ζωής του δεν πρέπει να συλλέγεται, να ανασύρεται ή να απορρίπτεται με τα οικιακά απορρίμματα.

Ο ακατάλληλος χειρισμός των αποβλήτων ηλεκτρικού και ηλεκτρονικού εξοπλισμού, μπαταριών ή συσσωρευτών μπορεί να οδηγήσει στην απελευθέρωση επικίνδυνων ουσιών που περιέχονται στο προϊόν. Προκειμένου να αποφευχθεί τυχόν μόλυνση στο περιβάλλον ή ασθένεια, ο χρήστης ενθαρρύνεται να διαχωρίσει αυτόν τον εξοπλισμό ή/και τις μπαταρίες ή τους συσσωρευτές που περιλαμβάνονται από άλλα είδη αποβλήτων και να το παραδώσει στην υπηρεσία δημοτικών συλλογών. Είναι δυνατόν να ζητηθεί από τον διανομέα η συλλογή αποβλήτων ηλεκτρικού και ηλεκτρονικού εξοπλισμού που πρέπει να πραγματοποιηθεί σύμφωνα με τους όρους και με τις διαδικασίες που θεσπίζονται από τις εθνικές διατάξεις εφαρμογής της οδηγίας 2012/19/ΕΕ.

Η χωριστή συλλογή και η σωστή επεξεργασία ηλεκτρικού και ηλεκτρονικού εξοπλισμού, μπαταριών και συσσωρευτών ευνοούν τη διατήρηση των φυσικών πόρων, τον σεβασμό για το περιβάλλον και την προστασία της υγείας.

Για περισσότερες πληροφορίες σχετικά με τον τρόπο συλλογής των αποβλήτων ηλεκτρικού και ηλεκτρονικού εξοπλισμού, μπαταριών και συσσωρευτών είναι απαραίτητο να επικοινωνήσετε με τους δήμους ή τις δημόσιες αρχές που είναι αρμόδιες για την έκδοση των αδειών.

### DNK-Informationer til behandling af affald fra elektriske og elektroniske udstyr der indeholder batterier og akkumulatorer

Dette symbol, der vises på produktet, på batterierne eller på akkumulatorene, på indpakningen eller i dokumentationen, angiver at selve produkt, på dets levetid eller opbrugt, ikke skal opsamles, genvindes eller bortskaffes sammen med normalt husholdningsaffald.

En ukorrekt behandling af affald fra elektriske eller elektroniske udstyr, af batterier og akkumulatorer, risikerer at udlede farlige stoffer indeholdt i produktet. For at forebygge ventuelle skader for miljøet eller sundheden, bedes brugeren om at behandle dette udstyr, og/eller de medfølgende batterier eller akkumulatorene separat fra andre affaldstyper, og at levere det til det kommunale opsamlingscenter, eller at anmode leverandøren om opsamling, i henhold til forskrifterne, der er angivet i de nationale forordninger til gennemførelse af Direktivet 2012/19/EF.

Den separate opsamling og genvinding af de nedslidte elektriske og elektroniske udstyr, af batterierne og af akkumulatorene, fremmer bevarelsen af de naturlige ressourcer, og sikrer at dette affald behandles ved at tage hensyn til miljøets og sundhedens varetagelse.

Til yderligere informationer angående opsamling af affald fra elektriske og elektroniske udstyr, af batterier og akkumulatorer, er det nødvendigt at rette henvendelse til Kommunerne eller til de ansvarlige myndigheder til udstedelse af bemyndigelserne.

### POL-Informacje dotyczące zarządzania odpadami sprzętu elektrycznego i elektronicznego zawierającego baterie i akumulatory

Niniejszy symbol znajdujący się na produkcie, bateriach, akumulatorach, na ich opakowaniu lub na dokumentacji, wskazuje, że produkt, baterie lub akumulatory po zakończeniu okresu użytkowania nie mogą być zbierane, odzyskiwane lub utylizowane wraz z odpadami komunalnymi.

Niewłaściwe postępowanie ze użytym sprzętem elektrycznym i elektronicznym, bateriami lub akumulatorami może powodować uwolnienie niebezpiecznych substancji zawartych w produktach. Celem uniknięcia jakichkolwiek szkód dla środowiska lub zdrowia, użytkownik proszony jest o odseparowanie niniejszego sprzętu i/lub dołączonych baterii lub akumulatorów od innych rodzajów odpadów i dostarczenia go do miejskiego punktu zbierania odpadów. Możliwe jest zwrócenie się z prośbą do dystrybutora o odebranie odpadów sprzętu elektrycznego i elektronicznego, na warunkach i zgodnie z procedurami ustanowionymi przez przepisy krajowe transponujące dyrektywę 2012/19/UE.

Oddzielna zbiórka i prawidłowe przetwarzanie sprzętu elektrycznego i elektronicznego, baterii i akumulatorów sprzyja ochronie zasobów naturalnych, poszanowaniu środowiska i zapewnieniu ochrony zdrowia.

Aby uzyskać więcej informacji dotyczących zbiórki użytego sprzętu elektrycznego i elektronicznego, baterii i akumulatorów, należy skontaktować się z władzami miejskimi lub organami publicznymi odpowiedzialnymi za wydawanie zezwoleń.

### SVN-Informacije o ravnanju z odpadno električno in elektronsko opremo, ki vsebuje baterije in akumulatorje

Ta simbol, ki se nahaja na izdelku, baterijah, akumulatorjih ali na njihovi embalaži ali v dokumentaciji, označuje, da se po izteku življenjske dobe izdelka ter baterij ali akumulatorjev, ki jih izdelek vsebuje, ne sme zbirati, predelati ali odstranjevati skupaj z odpadki iz gospodinjstev.

Neprijemno ravnanje z odpadno električno in elektronsko opremo, baterijami ali akumulatorji lahko povzroči izpust nevarnih snovi, ki jih vsebujejo izdelki. Da bi preprečili morebitne škodljive vplive na okolje ali zdravje, uporabnike pozivamo, da tovrstno opremo in/baterije ali akumulatorje, ki jih oprema vsebuje, ločujejo od drugih vrst odpadkov ter jih oddajo občinski službi za zbiranje odpadkov. Od distributerja lahko zahtevate prevzem odpadne električne in elektronske opreme pod pogoji in na načine, skladno s katerimi je bila Direktiva 2012/19/EU prenesena v nacionalno zakonodajo.

Ločevanje in ustrezna obdelava električnih in elektronskih naprav, baterij in akumulatorjev pripomoreta k ohranjanju naravnih virov, spoštovanju okolja ter zagotavljata varovanje zdravja.

Za dodatne informacije o načinih zbiranja odpadne električne in elektronske opreme, baterij in akumulatorjev se obrnite na občine ali na javne organe, ki so pristojni za izdajanje dovoljenj.











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