FOGHET EVO water

INSTALLATION, USE AND MAINTENANCE MANUAL

To be kept by the purchaser

FOGHET EVO RFE

Wood and pellet operated water system product

SM062 EN REV05 2018_05

Dear Customer,

thank you for having chosen to heat and save with a Jolly Mec product. Please carefully read and keep this sheet before using the equipment.

This sheet provides necessary information and suggestions on how to correctly install, use, clean and maintain the product. Knowing and observing these instructions will allow you to fully and safely enjoy the potential your equipment can offer you.

TABLE OF CONTENTS

CHAP.01 PREMISES

01.1 WARNINGS

- *Familiarity and compliance with the instructions given in this manual will ensure quick installation and correct use of the appliance.*
- *Read the manual attentively before commencing installation, and be certain to follow the directions it contains, otherwise the warranty could be invalidated and the performance and safety of the appliance jeopardized.*
- *The installation manual is an integral part of the product and must be given to the user.*
- *It must be kept in a safe place and consulted carefully, as all of the warnings provide important information on safety during installation, use and maintenance.*
- *Incorrect installation of the appliance could cause damage and injury to people or animals, for which the manufacture cannot not be held liable.*
- *Installation shall be performed by qualified operators in accordance with the regulations in force in the Country of installation.*
- *The manufacturer declines any contractual or non-contractual liability for damages caused by errors in installation or use of the appliance or failure to follow the instructions contained in this manual.*
- *All rights on the reproduction of this technical manual are owned by Jolly Mec Caminetti S.p.A.*
- *The descriptions and illustrations provided in the following publication are not binding.*
- *Jolly Mec Caminetti S.p.A reserves the right to make any modifications that may be deemed appropriate.*
- *This manual cannot be given to third parties for perusal without the written permission of Jolly Mec Caminetti S.p.A*
- *The technical directions for installation contained in this manual should be considered as basic requirements. Regulations in some countries may be more restrictive; in this instance, comply fully with the regulations prevailing in the country of installation (**all laws and local bylaws must be observed when installing and using the appliance, including those referring to national and European standards**).*
- *Never use the appliance as an incinerator, or in way other than that for which it was designed. Any other use is deemed improper and therefore dangerous.*
- *Do not use fuels that are not recommended under penalty of cancellation of the warranty.*
- *When the appliance is running, the glass and other visible parts reach extremely hot temperatures to the touch; handle with extreme care to avoid burns.*
- *Do not place the appliance in direct contact with combustible materials.*
- *Do not make any unauthorised modification to the appliance. Any unauthorised modification will automatically invalidate the warranty and release the manufacture from all liability.*
- *Use only original spare parts recommended by the manufacturer. Original spare parts are available through retailers, specialised Tecnical Service Centers, or directly at the head office of Jolly Mec Caminetti S.p.A.*
- *Acceptance of the machine by the user must be “total”, including the sound level of operation, comparable to an electrical appliance. Complaints for characteristics not indicated in this manual shall not be accepted.*

01.2 SYMBOLOGY

In this manual, points of considerable importance are marked with the following symbology:

	**INSTRUCTION:**	Instructions regarding the correct use of the appliance.
	**WARNING**	This point is particularly important.
	**DANGER**	An important point regarding behaviour for preventing injury and damage to materials is expressed.

01.3 APPLIED STANDARDS

All JOLLY MEC products are constructed according to the following directives:

- **EU 305/2011** European construction products regulation.
- **2006/42/CE** Machines.
- **2014/30/UE** Electromagnetic compatibility (EMC).
- **2014/35/UE** Low voltage (LVD) - electrical safety.
- **2011/65/EU (RoHs2)** Restriction of the use of certain hazardous substances in electrical and electronic equipment
- **2014/53/UE** Radio Equipment
- **2014/68/UE** Pressure Equipment (PED)

And in compliance with the standards:

- **CEI EN 61000-3-2** Electromagnetic compatibility (EMC) - Limits - Limits for harmonic current emissions (equipment input current ≤ 16 A per phase).
- **CEI EN 61000-3-3** Electromagnetic compatibility (EMC) - Limits. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection.
- **EN 55014-1** Electromagnetic compatibility. - Requirements for household appliances, electric tools and similar apparatus - Emission
- **EN 55014-2** Electromagnetic compatibility – Requirements for household appliances, electric tools and similar apparatus - Immunity. Product family standard.
- **EN 60335-1** Safety of household electrical appliances and similar products. - General safety regulations
- **EN 60335-2-102** Safety of household electrical appliances and similar products. - Special regulations for appliances fitted with gas, diesel or solid fuel burners and electrical connections.
- **EN 62233** Measurement methods for electromagnetic fields of electrical appliances for home use and similar goods regarding human exposure.
- **EN50581** Technical Documentation For The Assessment Of Electrical Products With Respect To The Restriction Of Hazardous Substance.
- **EN 7129** Domestic and similar gas systems powered by the distribution mains.
- **UNI 10412-2** Hot water heating system - Safety requirements - Specific requirements for systems with domestic type heating devices powered by solid fuel with built-in stove, with total fire power not over 35 kW.
- **UNI 10683** Heat generators operating with wood or other solid bio fuels - Installation requirements
- **UNI EN 303-5** Heating boilers. - Heating boilers for solid fuels, manually and automatically stoked, nominal heat output of up to 500 kW - Terminology, requirements, testing and marking.
- **UNI EN 1443** Fireplaces - General requisites
- **UNI EN 1856-1** Chimneys - Requirements for metal chimneys - System chimney products.
- **UNI EN 1856-2** Chimneys. Requirements for metal chimneys - Metal flue liners and connecting flue pipes.
- **UNI EN 13229** Insert appliances including open fires fired by solid fuels - Requirements and test methods
- **UNI EN 13240** Roomheaters fired by solid fuel - Requirements and test methods
- **UNI EN 13384** Fireplaces - Thermal calculations and dynamic fluid.
- **UNI EN 14785** Residential space heating appliances fired by wood pellets - Requirements and test methods
- **UNI EN ISO 12100** Machine safety.

01.4 USE AND STORING OF THE INSTALLATION AND MAINTENANCE MANUAL

- **Recipients of the manual**

The use and installation manual is addressed to users responsible for the installation, operation and maintenance of the stove; particular attention must be given the parts of the manual concerning safety.
If the product is subsequently resold, the user is requested to hand over this sheet and to inform the manufacturer of the name of the new owner, so that the latter may receive any updates issued.

- **Scope of the manual**

The manual contains information on the correct use of the product in accordance with the purposes for which it was designed and built. It also provides information about loads, commissioning, repair and maintenance of the stove in conformance with the limits set down by the manufacturer.

- **Conservation of the manual**

The installation and maintenance manual is an integral part of the product and must be conserved up to the time when the stove is dismantled. It must be kept in a protected, dry place out of direct sunlight and near the product so that it is always readily available for consultation.
Should the manual get damaged, the user must request a copy from the retailer where he purchased the appliance. When requesting assistance, always make reference to the MODEL, LOT and SERIAL NUMBER indicated on the label shown in **CHAP.05.2 - PRODUCT IDENTIFICATION**.

- **Updating the manual**

The installation and maintenance manual reflects the status of the technology at the time the product was marketed. The manufacturer reserves the right to make modifications to the product, and consequently the relative manual, without any obligation to update previous editions.

01.5 MANUFACTURER LIABILITY AND WARRANTY CONDITIONS

Upon the delivery of this manual, Jolly Mec S.p.A. cannot be held liable, whether civil or criminal, for accidents due to partial or total non-compliance with the specifications herein contained.
The manufacturer is especially held harmless from any liability in the following cases:

- Improper use of the product
- Use not intended by specific national regulations
- Incorrect installation
- Faults in the electrical connections, the connections of the fume exhaust system and/or the comburent air ducting system e and in plumbing connections
- Failure to carry out maintenance as prescribed in this manual
- Unauthorised modifications or operations
- Use of replacement parts that are non-original or not specific to the model
- Total or partial failure to follow the instructions
- Exceptional events (e.g.: breakages due to natural or accidental events as lightening, short circuits etc.)
- Damage caused by electrical power cuts, sudden fluctuation of supply voltage, electromagnetic fields
- Use of fuel with characteristics other than those recommended in this manual

In the above cases the warranty is void.

Please refer to Annex **SM089** for details on the warranty conditions and compiling the relative certificate.

NOTE

In the event of a malfunction or intervention request by a specialised Technical Service Center, the user must be able to demonstrate the use of fuel with the characteristics required by this manual.
The Manufacturer disclaims all liability concerning anomalies or malfunctions caused by use of FUEL which does not comply with the recommended requirements.

CHAP.02 ACCIDENT PREVENTION / SAFETY REGULATIONS

02.1 GENERAL CONSIDERATIONS

- The manual refers to essential aspects of the directives, regulations and dispositions on using the machine, summarising its most significant points.
- General legal regulations and mandatory rules regarding injury prevention and environmental protection must be observed. These obligations also include regulations regarding the use of personal protective equipment.
- For all work to be done on the system, the following dispositions and regulations in force must be observed regarding accident prevention, following the indications.

- Before using the system the first time, the user must have read and understood the instruction manual perfectly and this chapter in particular.
- The user must also make sure that the machine is always in good condition as regards its safety requirements.

- During maintenance and inspection activities, wear the protective garments specified in following **CHAP.02.4 - EQUIPMENT FOR OPERATORS AND MAINTENANCE PERSONNEL.** Cleaning and maintenance activities may only be performed with the equipment cold and preferably disconnected from the power mains or with the main switch in the “O” position.
- Danger warnings and signals in the form of plates, labels and markings must not be removed or made unidentifiable. If they are worn or broken, they must be replaced.

- Modifications, additions or transformations must not be made on the machine and its components without the manufacturer’s authorisation. This is valid first and foremost for installation and regulation of the installed safety devices. Failure to comply with this warning relieves the Manufacturer of all and any responsibility.
- Make sure, before starting up every time and after carrying out maintenance, that dismantled parts have been repositioned correctly and in particular all the protection devices that impede access to the machine.

02.2 SAFETY REGULATIONS FOR ROUTINE MAINTENANCE AND USE

- The user and/or owner of the product is required, in accordance with the laws in force, to assign the installation and maintenance to qualified and specialised operators, and acknowledge the risks and hazards should they fail to observe this requirement.
- Children of at least 8 years old, people with reduced physical, sensory or mental capabilities, or lacking the experience or the needed knowledge can use the device only under surveillance or having been instructed on the device safe use and on the understanding of the deriving dangers. Children are not allowed to play with the device. Cleaning and maintenance are meant to be performed by the user and not by unsupervised children.
- The settings and programming of the product must only be performed by adults who have received suitable and specific training. Errors or incorrect settings can create hazardous conditions and trigger malfunctions with relative consequences for persons and things.
- Before any cleaning and/or routine or extraordinary maintenance on the machine, disconnect it from all energy sources; in particular, turn the electrical power switch to “O”.
- Prior to installation, the user and installer are obliged to check that the mains electrical supply to which the machine will be connected, corresponds to the voltage on the identification plate (see **CHAP.05.2 - PRODUCT IDENTIFICATION**), and that it is equipped with all suitable safety devices to classify the electrical system as compliant with applicable safety standards. If this is not the case, contact a Qualified Technician to adapt the system to required standards.
- Upstream from the machine (at the user’s expense) on the electrical power supply line, a bipolar switch must be installed that is able to intercept all the current phases (see **CHAP.06 - TECHNICAL DATA**).
- The irradiation area includes the area between the opening of the hearth and up to 1 metre of space frontally as well as laterally. No inflammable object must be left in this area (such as: inflammable liquids, fire-starting products or firewood, drapes, wooden decorations, rugs, etc.).
- Do not use the stove to dry clothes, it could overheat and cause an outbreak of fire.

- **ATTENTION - BEWARE OF BURNS**, most of the outer surfaces of the stove are very hot, door handle, glass, metal sides, majolica or metal top, fume exhaust pipe etc. Never touch the stove with naked hands when it is running; always use heat protection gloves, such as those supplied with the stove, when handling all parts.
- Before doing any internal cleaning or maintenance, you must wait until the machine reaches the ambient temperature.
- If the stove is in alarm status due to a malfunction, do not attempt to restart it before finding out what has caused the heat generator to shut down.
- Never wash the internal parts of the combustion chamber with water.

- In alarm status for failed start up, do not try to restart the stove until the firebox has been thoroughly cleaned
- The appliance must always be started up with the firebox empty, without pellets and without unburned fuel from previous use.
- Do not attempt to ignite the fuel with inflammable liquids or solids; the stove must ignite automatically via the electrical components installed onboard.
- Do not load pellets manually into the firebox before or whilst the appliance is running.
- Keep the ventilation grids in the area the appliance is installed in clean conditions.
- Never load any fuel other than pellets into the stove storage hopper. Corn, nuts or other combustible materials must not be used as fuel for the appliance.
- Check and periodically clean the fume exhaust pipe, from the appliance to the flue (Union).
- It is strictly prohibited to start up the product with the combustion chamber door open or allow it to run with the glass broken
- In case of need and if any operating problems persist, the user should contact the specialised Technical Assistance Center.
- **Never try to start the device using ethyl alcohol or other flammable liquids.**

02.3 SAFETY REGULATIONS FOR EXTRAORDINARY MAINTENANCE AND INSTALLATION

- The user and/or owner of the product is required, in accordance with the laws in force, to assign the installation and maintenance to qualified and specialised operators, and acknowledge the risks and hazards should they fail to observe this requirement.
- The installation of the heat generator and the relative combustion product exhaustion system, the electrical connections, the commissioning and extraordinary maintenance services MUST always be performed by qualified and licensed professional staff.
- The product must be installed in accordance with the laws and standards in force in the State, Region or Area in which the machine is installed.
- Installation in bedrooms, rooms with a volume below 15 m^3 or with explosive atmospheres is strictly prohibited.
- The system installer MUST issue a Declaration of compliance for the work performed after commissioning the system, in accordance with the laws in force related to system safety standards.
- The installation technician must inform the user on safe equipment use.
- The installation operator is responsible for the installation and is therefore required to perform the work to top workmanship standards.
- **The appliance must be connected to a combustion product exhaustion flue built in accordance with applicable standards and certified with a declaration of compliance.**
- Should any installation defects arise during the optional Commisisoning service, the specialised Technical Service Center, can refuse to endorse use of the product for safety reasons and submit a written Servicing Report to the User informing him that he and the Installation operator shall be jointly liable for any damage to persons, animals or things if used.
- Before installing the machine, the customer and installation operator must ensure that the flooring on which it will be positioned is suitably levelled and can support the weight (see **CHAP.06 - TECHNICAL DATA**). Iff there is any doubt on the solidity of the flooring, it is essential to have a Structural Engineer verify relative installation feasibility.
- Only specialised and qualified personnel may work or carry out checks inside the machine, complying with safety regulations.
- Prior to installation, the user and installer are obliged to check that the mains electrical supply to which the machine will be connected, corresponds to the voltage on the identification plate (see **CHAP.05.2 - PRODUCT IDENTIFICATION**), check that the system is sized so as to bear the maximum load required of the product, and also that it is equipped with

all suitable safety devices to classify the electrical system as COMPLIANT with applicable safety standards. If this is not the case, contact a Qualified Technician to adapt the system to required standards.

- The power cord plug must be connected only AFTER the conclusion of the installation and assembly of the device, and must remain accessible after installation if the device does not have a suitable and accessible double-pole switch.
- Personnel assigned to handling the machines and equipment must always wear industrial gloves and boots.
- The Maintenance Operator must recommend the Customer to sign an annual maintenance contract for the product, so as to maintain the levels of safety and efficient performance of the product.
- The Maintenance Operator must check the working hours of the product between one maintenance intervention and another, to verify the actual work load of the stove. The actual hours of operation shall be reset at the end of the Technical intervention and indicated on the Servicing Report.

02.4 EQUIPMENT FOR OPERATORS AND MAINTENANCE PERSONNEL

Every operator performing maintenance on the machine, must wear safety garments and personal protective equipment:

1 Protection headphones

2 Gloves hand protections

3 Respiratory mask

4 Face mask or goggles

5 Accident prevention boots

6 Overalls or smock

02.5 RESIDUAL RISKS

Though JOLLY MEC CAMINETTI S.p.A. does everything within its power to produce its systems with the greatest competence regarding safety and consulting all the directives, laws, and regulations available, there are still, if minor, some residual risks during the phases of:

- TRANSPORT AND INSTALLATION
- ELECTRICAL CONNECTIONS (Which must be done by a qualified electrician)
- MAINTENANCE

Therefore, the technicians who perform these tasks must take these residual risks into account.

WARNING Removal or tampering with the protection and safety devices can be only be done voluntarily and may cause serious injury to people.
Replace the safety signals when they become illegible or come off.

CHAP.03 HANDLING AND TRANSPORT

03.1 RECEIVING GOODS

The machine is delivered on a pallet, packed in a wooden cage with a cellophane hood.
when receiving merchandise, check that:

- all packaging is intact
- all of the merchandise indicated on the delivery bill has actually been delivered
- the supply corresponds to the order specifications;
- if the packaging is damaged, check the condition of the contents, because any breakages must immediately be reported to the carrier and to the retailer
- check there is no damage to any supplied elements; if there is any breakage detected, report it as soon as possible to the carrier and to the retailer.

If any material listed on the delivery note is missing, report it to the retailer as soon as possible.

WARNING **Danger of suffocation**

Make sure that children do not come into contact with packaging materials, plastic film or polystyrene as this could cause suffocation.

03.2 LIFTING AND TRANSPORT

Personnel in charge of handling the product must have read and thoroughly understood the safety prescriptions in **CHAP.02 - ACCIDENT PREVENTION / SAFETY REGULATIONS** of this manual and must wear work gloves and safety footwear.
For safety reasons, unauthorised persons must not be in the area while the product is being moved.

The product must be moved only with a trolley or pallet fork, and never with belts, chains, overhead cranes (see **CHAP.06 - TECHNICAL DATA** for the weight). All parts of the packaging coming into contact with the crane, belts or straps must be protected.
Unless there are obstacles, lift the product to a maximum of 30 cm from the ground and move it slowly, avoiding jerky or brusque movements.

WARNING **Danger of crusching, collision and abrasions.**

CHAP.04 ECOLOGICAL REGULATIONS

04.1 DISPOSAL OF THE MACHINE

Directive 2012/19/UE (waste electrical and electronic equipment - WEEE): information for users.
The crossed-out wastebasket symbol on the appliance means that at the end of its useful lifespan, the product must be disposed of separately from ordinary household wastes.
The user is responsible for delivering the appliance to an appropriate collection facility at the end of its useful lifespan.
Appropriate separate collection to permit recycling, treatment and environmentally compatible disposal helps prevent negative impact on the environment and human health and promotes recycling of the materials making up the product.
For more information on available collection facilities, contact your local waste collection service or the shop where you bought this appliance.

NOTE

The machine must be disposed of in a manner that complies with the laws in force and the environment.
When taking it to the firms that dispose of ferrous materials, handle the stove as described in **CHAP.03 - HANDLING AND TRANSPORT.**

WARNING

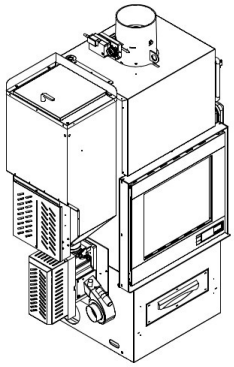
Danger of environmental pollution

Adopt positive civic behaviour and DO NOT disperse the packaging into the environment, but take it to waste disposal centres for recycling. All packaging can be recycled, as it consists of wood, polyethylene film, polystyrene and cardboard

CHAP.05 DESCRIPTION

05.1 PRODUCT PRESENTATION

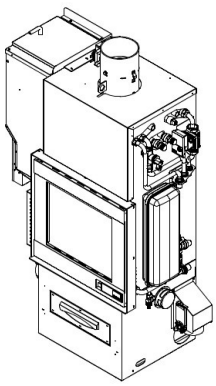
Jolly-Mec products are the result of over forty years experience in the wooden biomass combustion sector; they are designed and engineered to meet the increasing demands of today's markets with high performance levels and savings enveloped in a modern design.



"FOGHET EVO is a water heater with computerized control, homologated and tested according to European standards EN 13229, EN 14785 operating with wood or wood and pellets (ALTERNATIVE AND RENEWABLE ENERGY).

Foghet Evo is a monobloc consisting of a double-wall heat exchanger in special steel whose particular construction allows maximum exploitation of the combustion heat, obtaining high efficiencies of up to 90%, making it one of the best in the category for efficiency and emissions.

The Foghet Evo has an electronic controller that manages the fireplace when operating on wood or pellets. When running on pellets, it has a chronothermostat for automatic start up and switch off with room temperature and accumulation. With the new-generation electronic controller, when programmed, if the wood finishes and heating is required the boiler temperature probe makes the fireplace automatically switch from wood to pellet mode with automatic igniting of the pellets, maintaining the set temperature. The control unit warns when the pellets run out with an acoustic and visual warning and also allows management of a supplementary pellet container, a parallel boiler, a thermoboiler or thermal cell and the circulation pump for the heating system. With the controller it is also possible to run a check-up on the various components even with the fireplace out.



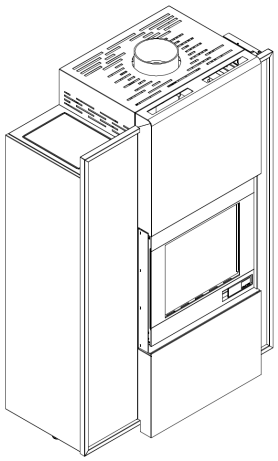
When running on wood, it can also operate with intermittent combustion; it can be used as a fireplace or normal stove, but offers a series of advantages of controlled combustion based on the temperature.

Wood-burning Foghet Evo, with the specific pellet burner JOLLY MEC fitted, becomes a "continuous fire" heating machine, exactly like a boiler. The pellet hopper has a capacity of approximately 45 kg, however, to obtain a longer burn time it can be coupled to a second and larger hopper, even located in another room.

The operating mode can be quickly switched from wood to pellet mode and vice-versa: simply move the grid fitted above the burner fireplace and select pellet mode.

Foghet EVO

In pellet mode, heating power is managed by means of the electronic controller provided: from 9 kW on minimum up to 18 kW on maximum. The fireplace can be purchased in the wood version and the burner can be fitted at a later stage, since the fireplace is already arranged for it.



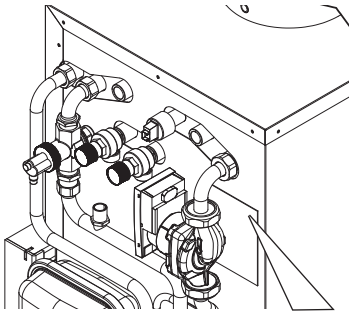
It is fitted with a double ceramic glass door to reduce the high temperatures generated by combustion.

The water-heating Foghet Evo can also autonomously heat an entire building with radiators, underfloor heating, storage cistern, etc. It comes with a standard closed tank hydraulic kit already assembled and tested, a cooler exchanger that controls and manages the water temperature in case of an electrical black-out, as required by the UNI EN 10412-2 standard for closed cup solid fuel heat generators. On request, and non-standard, Foghet EVO can also be supplied with a basic hydraulic kit, fitted with safety devices only.

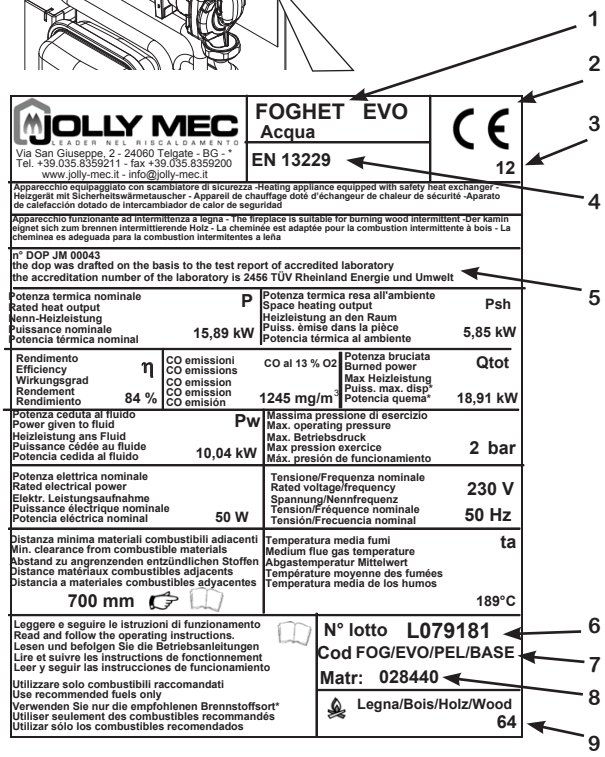
A stove version of Foghet Evo is also available with RFE cladding.

RFE

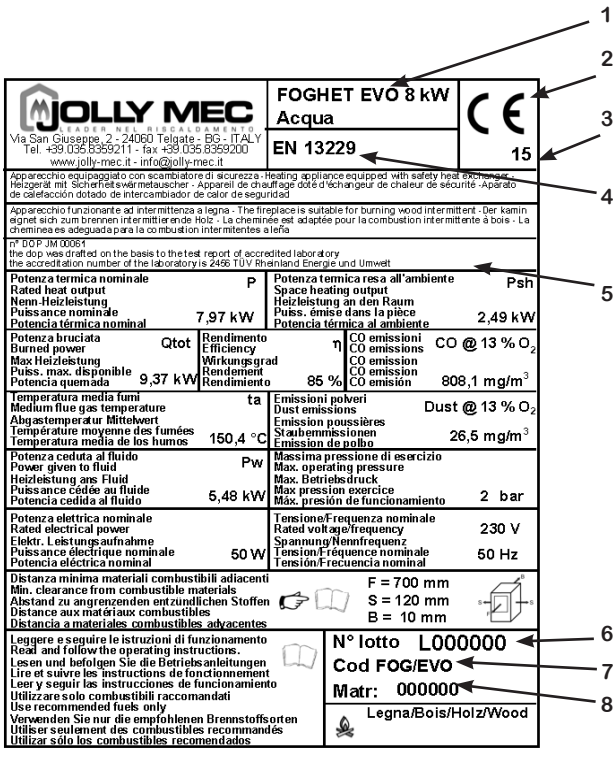
05.2 PRODUCT IDENTIFICATION



It is COMPULSORY to indicate the product MODEL, the LOT number and SERIAL NUMBER in all communications with the Manufacturer.
Identification numbers are printed on the adhesive plate located on the right side of the device as illustrated in the figure. Stove performance values measured during inspection tests according to the indicated reference and EC markings are also
included on the plate.



1	Product model
2	CE marking
3	Year of commissioning and certification
4	Reference standard
5	Performance declaration No*
6	Product LOT N°
7	Product sales code
8	Product serial number
9	Product label code



WARNING

* Pursuant to European Regulation No. 305/2011, manufacturers are now required to have the DoP - Declaration of Performance for each product of own design concerned; Jolly-Mec did namely provide all of these documents in downloadable electronic form that you can easily see on the website of the Company at the following address: http://www. jolly-mec.it/.

NOTE

The illustrated example plate may differ in graphics from the original affixed to the product.

CHAP.06 TECHNICAL DATA

06.1 HOMOLOGATION

Technical specifications resulting from laboratory tests conducted according to EN 14785 and EN 13229 test methods at the CERTIFICATION institute.

Description	FOGHET EVO (Pellet)	FOGHET EVO (Wood)	FOGHET EVO 8 kW (Wood)	M.U.
Burned power	20	18,91	9,37	kW
Total heating output	18,2	15,89	7,97	kW
Power given to fluid	13,45	10,04	5,48	kW
Fuel hourly consumption at total heating output	4,2	4,1	2,2	kg/h
Reduced heating output	7,42	-	-	kW
Fuel hourly consumption at reduced heating output	1,7	-	-	kg/h
Space heating output	4,8	5,85	2,49	kW
Efficiency at total heating output	91,02	84,03	85,08	%
Efficiency at reduced heating output	88,9	-	-	%
Rated voltage/frequency	230/50			V/Hz
Electrilcal absorption (at full capacity - during start-up)	220/360	50 / -	50 / -	W
Total weight	245			kg
Standard hopper capacity	45	-	-	kg
Flue draught	12+/-2			Pa
Fume exhaust diameter	150			mm
Maximum water operating pressure	2			bar
Heat pump head (@ 1 m^3/h)	6			m
Heating pump maximum capacity	5			m^3/h
Maximum flue gas temperature at total heating output	200	300	250	°C
Average flue gas temperature at total heating output	176	189	151	°C
Average flue gas temperature at reduced heating output	133	-	-	°C
CO (13% O_2) at total heating output	117	1245	808	mg/m^3
CO (13% O_2) at reduced heating output	77,2	-	-	mg/m^3
CO_2 at total heating output	14,66	8,8	6,28	%
CO_2 at reduced heating output	8,05	-	-	%
Flue gas mass flow at total heating output	10,0	14,9	10,3	g/s
Flue gas mass flow at reduced heating output	7,2	-	-	g/s
Total (13% O_2) at total heating output	17,4	38,9	26,5	mg/m^3
Maximum load	-	3,1	2,0	kg
Distance from inflammable material	200 side - 700 front	200 side - 700 front	200 side - 700 front	mm
Energy efficiency class	A+	A+	A+	-

Note: This device can not be used with shared flues.

Recommended fuels: for a list of recommended fuels, please see CAP.06.2 - RECOMMENDED FUELS.

WARNING

All appliance tests, final inspection and fine-tuning was performed using the recommended certified pellets.. Jolly Mec Caminetti S.p.A. is not responsible for malfunctions, breakdowns or problems due to the use of pellets that are not recommended, as combustion parameters vary according to the quality of the pellets.
To achieve best operational results, it may be necessary to change the default factory settings on the control unit during the optional Commissioning service. These operations must only be performed by a specialised Technical Service Center.

06.2 RECOMMENDED FUELS

- **PELLET QUALITY**

WARNING PELLET QUALITY IS VERY IMPORTANT; PLEASE READ THIS SECTION CAREFULLY

A pellet product's performance is significantly linked and highly influenced by the type and quality of wooden pellets that is burned. It is important to choose pellets that have no debris or impurities. The Association of Pellet Manufacturers with the Italian Thermotechnical Committee have established standards for identifying pellets in terms of energy*.

As the efficiencies of different wooden PELLETS qualities differ, likewise the efficiency and heat capacity emitted by the product running on pellets will vary. Similarly, unburned residue left in the combustion chamber is inversely proportionate to pellet quality: the lower the pellet purity, the faster dirt accumulates in the machine. Jolly Mec Caminetti S.p.A recommends the use of the same type of pellets used during the optional Commissioning service, i.e. when the settings and calibrations were made to suit the loaded combustible materials. Continuous switching of types and qualities of combustible materials will require continuous adjustments to settings by the specialised Technical Service Center, which can not be endorsed by the Manufacturer.

The main quality certifications for PELLETS on the European market are DIN Plus, Ö-Norm M7135 and UNI EN ISO 17225-2 (class A1 or A2), which guarantee the following quality standards:

* CERTIFIED PELLET CHARACTERISTICS	
Powder	1% maximum through a 3.2 mm screen
Apparent density	680 Kg/m^3 minimum
Dimensions	6 mm diameter from 25 to 30 mm of maximum length
Ash content	1% maximum
Humidity	8% maximum
Heating power	4,9 kWh/kg
Packaging	in eco-compatible or biodegradable material sacks

Store pellets at least 1 m from the appliance, in a dry place and not outdoors, not even under porches or roofings.
Do not use pellets that are very hard and with different dimensions; the mechanical parts are sized and tested for use with pellets with the above-mentioned characteristics.

No breakdown or malfunction depending on the quality of the pellets used and/or by the dosage of the quantity will be covered by the warranty.

NOTE WHAT YOU SHOULD KNOW ABOUT PELLETS:

pellets are obtained by a drawing process using sawdust discarded by virgin wood processing systems and therefore have no chemical additives. The consistency, compactness and strength with which the pieces remain intact is due to a substance contained in wood called lignin; this acts as a binder during the compression phase.

The various qualities of combustible materials can also depend on the sawdust mix used to produce the pellets, which generally have a standard length of between 5 and 30 mm, a diameter of between 5 and 6 mm, a weight of from 600 to 700 Kg/m3 and a humidity of no more than 8% of its weight.

One advantage over wood is its greater heating power; in fact, when using good quality wood, it is possible to achieve about 4.3kWh/Kg with a humidity rate of up to 15%, whilst with pellets this can climb to 4.9kWh/Kg and a water content of a maximum of 8%.

The sacks of pellets must be stored in a clean, dry place.

- **WOOD QUALITY**

WARNING WOOD QUALITY IS VERY IMPORTANT; PLEASE READ THIS SECTION CAREFULLY

The characteristics of fuel wood for stoves and fireplaces are defined by quality classes A1 and A2 set forth by UNI EN ISO 17225-5 standard.

WOOD COMBUSTION

Wood clean burning is a process that reflects the natural decomposition itself; this means that CO_2 (carbon dioxide) released does not increase or damage the CO_2 original contents in the atmosphere.
The basic prerequisites for clean combustion are:

1. Using dry and untreated wood
2. Using the correct size and quantity of combustible: too little firewood or logs too large impede the fireplace to reach the optimum operating temperature.

KINDS OF WOOD

Each type of wood is characterized by its own density (weight related to the volume) and from different calorific values (related to the mass and moisture present). We can identify two broad categories: hardwoods and softwoods.
Hardwoods, usually deciduous woods, are the most dense ones, weigh heavily and contain very little resin, burn slowly and are the best materials in providing long ranges of combustion.
Softwoods, such as conifers, have a lower density, produce a strong warm but burn much more quickly; so they are better advised for starting combustion; if used as main combustible it would be necessary to load the fireplace more frequently; furthermore their high resin contents bring to more dirt, flue gases and unburned components.

KIND OF WOOD	HEATING POWER (kWh/kg)
Silver Fir	4,5
Red Fir	4,4
Birch Tree	4,3
Hornbeam	3,9
Beech	4,0
Ash	4,2
Poplar	4,1
Oak	4,2
Locust (Robinia)	4,1
Durmast	4,2

SOME TIPS AND INFORMATION

- The best fuel is air dried untreated wood, with a humidity of ≤ 15-18%, beech, hornbeam, oak and acacia are highly recommended.
- The wood must be stored outdoors in a protected, dry and well-ventilated area.
- Excessively humid wood generates lower heat output, faster blackening of the glass and rapid corrosion of the heat generator.
- The wood must not be too old as it loses its capacity to catch fire (≤ 15 years).

SUITABLE QUALITY AND QUANTITY OF COMBUSTIBLE

The fireplace is designed to burn dry firewood having a water contents less than 15-18%. You can burn combustibles such as wood briquettes.

It should be paid close attention not to put an excessive amount of combustible because it brings the stove to emit an excessive amount of heat, so undergoing a warming over the predicted values and then causing really a potential damage to the structure as well as increased non-standard gas emissions.

IT IS FORBIDDEN TO BURN:

Burning waste of any kind, in particular plastics, is prohibited by law and because it can damage both the stove and the flue gas chimney.
It is also forbidden to burn given materials such as :

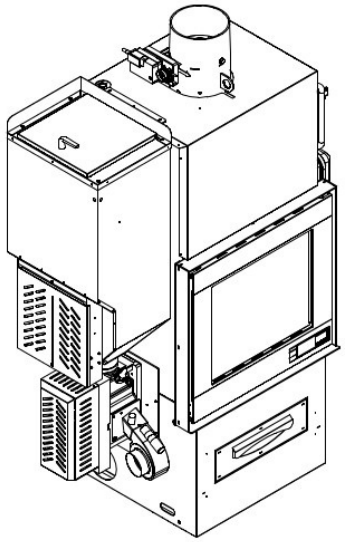
- Wet wood or bark residues
- Chipboard panels or (un)coated panel materials
- Paper, cardboard and old clothes
- Plastics and foams
- Wood treated with products for conservative treatments
- All solid or liquid materials which are not wooden

The efficiency of the fireplace also depends on the chimney draf.

06.3 COMPONENTS

The fireplace is supplied with a JOLLY ME-07-F burner and preassembled and tested pellet hopper, in wooden crate on pallets, packed with a cellophane hood, polystyrene and with the following parts:

- Assembly, use and maintenance manual
- Boiler body complete with tested hydraulic kit
- Standard pellet hopper with capacity of approx. 45 kg
- JOLLY MEC pellet burner
- Control panel with electronic controller
- Cast-iron grille for wood burning
- Wrench for burn pot locking screw



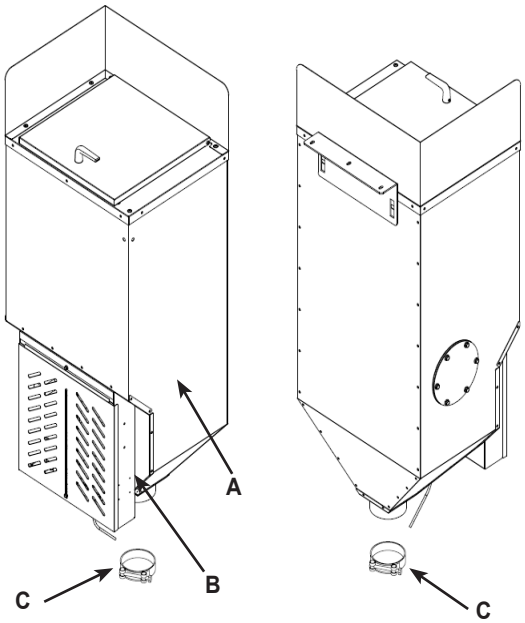
• Pellet hopper components

The JOLLY MEC burner and pellet hopper can be removed for transport.

1. Disconnect the power supply then detach the connectors.
2. Loosen the hopper/burner connection clamp.
3. Undo the two M8 screws inside the pellet hopper and remove the hopper.
4. Loosen the M6 locking screw on the burn pot container and remove the burn pot.
5. Remove the ash pan.
6. Undo the M6 screws securing the burner to the boiler and remove the burner.
7. Proceed in reverse order to refit.

To replace the electrical element

1. Disconnect the power supply then detach the connectors.
2. Undo the M6 screw and remove the protection casing.
3. Undo the three electrical element support M4 screws and remove the electrical element.
4. Proceed in reverse order to refit.



A. Standard pellet hopper

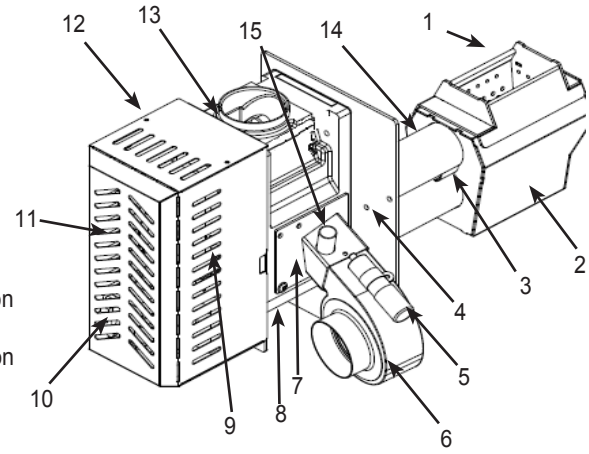
B. Level sensor (simplified electronic controller)

C. Hopper/burner connection clamp

NOTE When refitting, make sure the electrical element is correctly inserted in the support fixed to the burn pot container (when fixing with the screws, the flange must protrude approx. 2 mm with respect to the face of the assembly plate).

• Burner components

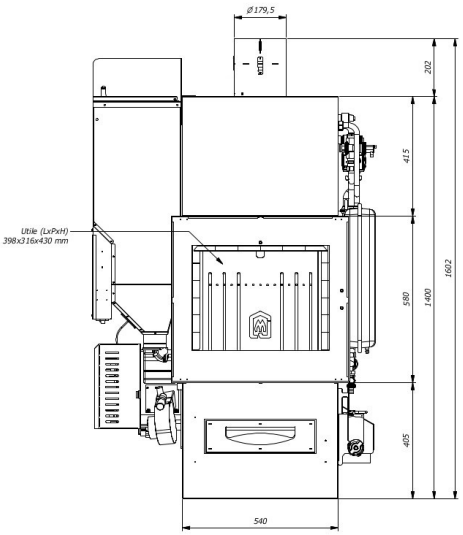
The burner consists of the following components:

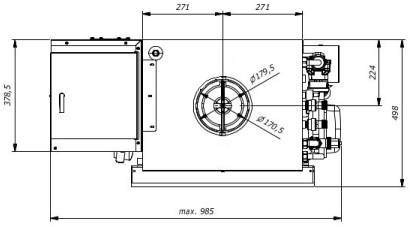


1. Burn pot
2. Burn pot locking screw
3. Electrical element
4. Air pressure switch connecting pipe
5. Condenser
6. Combustion air fan
7. Fan support
8. Safety thermostat
9. Sprocket wheels (accessible by removing the protection casing)
10. Main auger gearmotor (accessible by removing the protection casing)
11. Secondary auger gearmotor (accessible by removing the protection casing)
12. Protection casing
13. Motor block
14. Telescope with fastener plate
15. Glass ventilation air

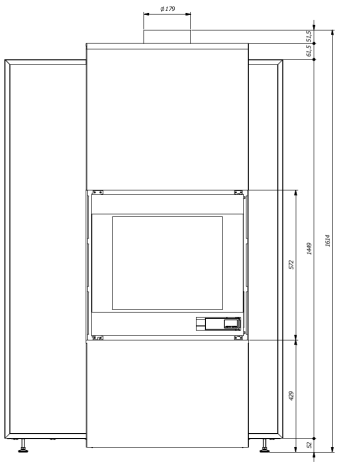
06.4 DIMENSIONS

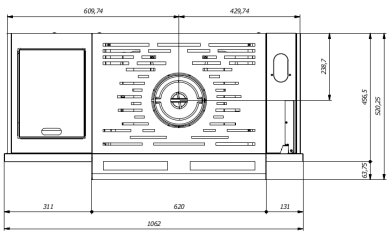
All measurements are in mm.





RFE version





CHAP.07 POSITIONING AND CONNECTIONS FOR THE INSTALLER

07.1 FLUE OR FUME EXHAUST SYSTEM

The flue or fume exhaust system is a fundamental element for the proper functioning of the stove and must comply with the following general standards:

UNI EN 1856-1 Fireplaces - Requirements for metal fireplaces - Products for fireplace systems

UNI EN 1856-2 Fireplaces - Requirements for metal fireplaces - Internal ducts and metal exhaust pipes

UNI 10683 Heat generators operating with wood or other solid bio fuels - Installation requirements

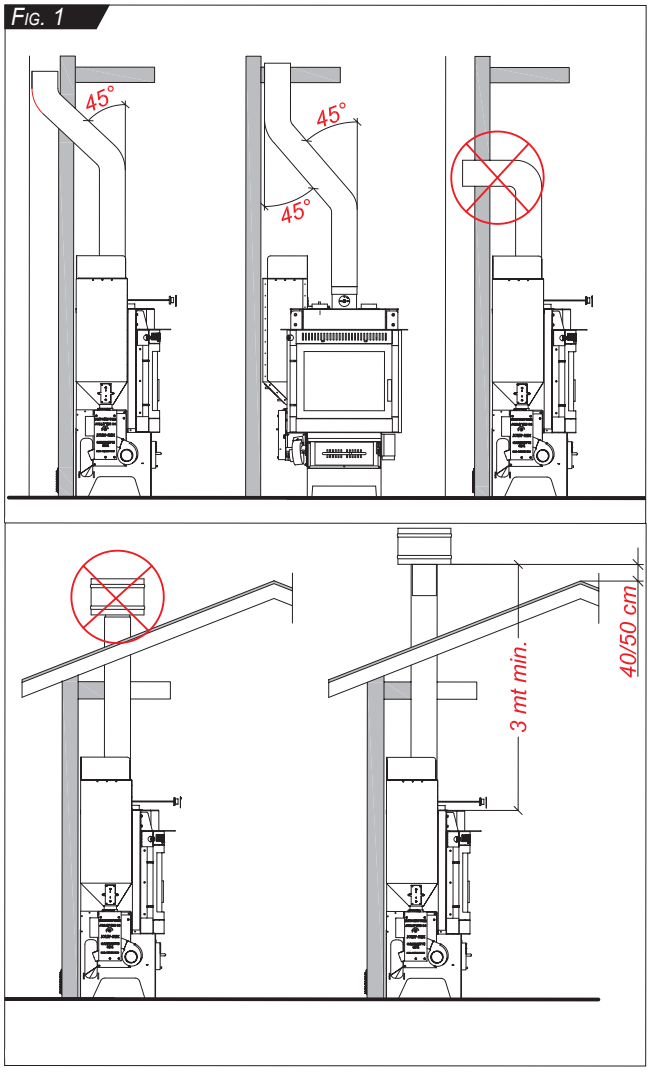
It is advisable that the project the fireplace is managed by a designer on the basis of a dimensional calculation of the chimney section and of both ducting and insulating sizing (UNI 13384). Each appliance must have its own chimney flue without any inlets from other appliances. The dimensions of the flue are strictly proportioned to its height, to be measured from the fireplace to the bottom of the chimney cap. To guarantee a correct smoke exhaust, the surface of the chimney terminal opening must double the chimney flue section and it does not have to be blocked by wire nets or other obstacles

The exhaust duct of the combustion products generated by the appliance must respond to the following requirements:

- all changes in direction must be open to inspection to facilitate maintenance.
- correct draught to maintain depression in the combustion chamber, as per the technical specifications, must be guaranteed.
- it must be watertight, waterproof and suitably isolated and insulated.
- must be made of suitable materials that resist normal mechanical stress, heat, the action of the combustion products and acid condensations.
- must be prevailingly vertical structures with deviations from the axis not greater that 45°.
- must be adequately distanced from combustible or inflammable materials via an air space or suitable insulation.
- must have an internal section which is preferably circular: square or rectangular sections must have rounded corners with a radius of no less than 20 mm.
- must have an internal section that is constant, free and independent.
- rectangular sections shall have a maximum ratio of 1.5 between sides.

It is recommended to use a windproof airfoil chimney cap.

Fig. 1



If the flue is installed externally it must be insulated to prevent the cooling of fumes and formation of condensation. The same is valid for the tract from the roof to the chimney cap (Torrino). For the union between the stove and the flue, or if there are deviations or curves, for easier, quicker and safer installation, we recommend using double-walled stainless steel pipes.

The use of pipes in fibre cement for connecting the equipment to the flue is forbidden.

Exhaust pipes must not run through rooms where the installation of combustion equipment is forbidden. The assembly of the flue chimney connection has to be done in order to guarantee that smokes doesn't escape in all different working conditions, to avoid the creation of condensation and the related smoke return to the product.

Horizontal tracts in assembly must be avoided.

The chimney system for the smoke exhaust MUST be dimensioned and projected by a Qualified Engineer. He will determine the proper smoke exhaust system taking into consideration the product technical data, kind of installation, installation location and mostly the installation technical regulation in force. The Engineer will give indications to the installer about the materials to use, smoke path section, insulation thickness, corrosion resistance and all requirements needed for the correct working of the system product-chimney.

The correct dimension of the air intake for ventilation and aeration of the installation location MUST be verified in conformity with the technical regulation in force.

Malfunctioning of the product caused by a smoke exhaust not properly projected and dimensioned WILL NOT be object of objections to Jolly-Mec and interventions at Jolly-Mec charge.

For appliance that must reach exhaust outlets that are not coaxial with regard to the issue of the fumes from the machine, changes in direction must be made using an open elbow of 45° (*FIG. 1*).

The use of counter slope elements is forbidden.The flue union must have a constant section and allow soot to be collected and swept away. Changes in cross-section are only allowed at the outlet of the heat generator: the use of adaptors on the coupling with the chimney flue is prohibited.

Running other air ducts and installation pipes inside the exhaust pipes, even if oversized, is forbidden.

One or more airtight reading points are recommended on the flue to check emissions after installation and measure draught.

Supporting the weight of the flue with the appliance union is strictly forbidden. Use specific stands or independent supports for this purpose.

To install other combustion devices in the same room where the appliance is installed, refer to UNI 10683 and UNI 7129 installation regulations.

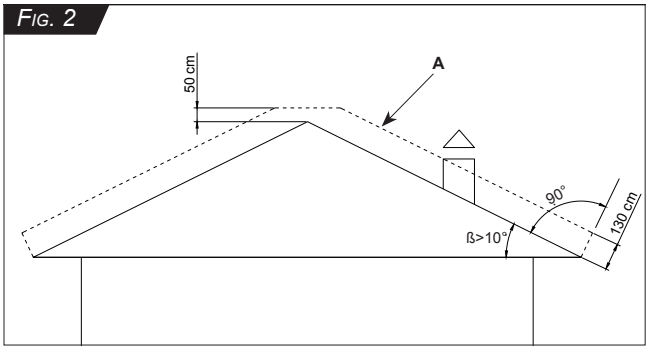
The minimum fireplace height must be over 3,0 m.

Installation of external fireplaces must be performed using insulated double-walled pipes, to prevent the formation of condensate; it must also be possible to inspect the base of the fireplace for routine maintenance which must be done at least once a year.

A minimum flue draught between 10 and 14 Pa must be guaranteed. This value must be measured using specific and controlled instruments each time the appliance and flue undergo maintenance.

The appliance could malfunction in very strong windy conditions, with the chimney cap installed in the reflux area (see *FIG. 2*, zone bordered by the dotted line A for roofs with ß>10° slant) of the roof, or without complying with the distances foreseen by UNI 10683.

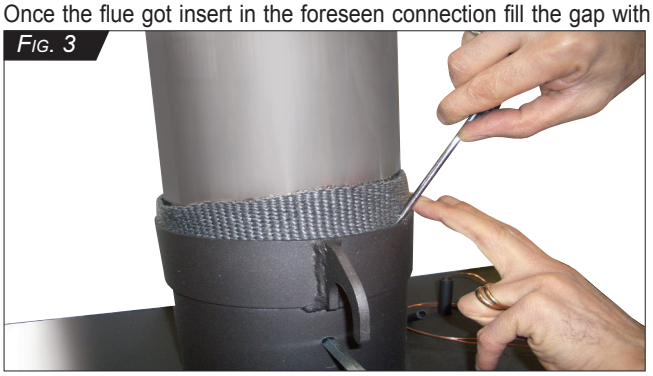
FIG. 2



- **Flue assembly phase**

Once the flue got insert in the foreseen connection fill the gap with the sealing in outfit (*FIG. 3*). The Foghet Evo fume exhaust has a diameter of 179 mm. A 150 mm diameter flue can be inserted directly inside. Use a suitable union if you need to use a larger sized flue.

FIG. 3



07.2 INSTALLATION ROOM VENTILATION

According to reference regulation UNI10683, 4 Pa depression must be verified between the installation room interior and exterior. Prepare adequate ventilation openings in the room where the product is installed to permit at least 50 m3/h clean comburent air flow not taken from polluted rooms. The ventilation openings, if fitted with insect-proof mesh, must be easily removable and undergo periodic cleaning to ensure clear air flow passage.

WARNING

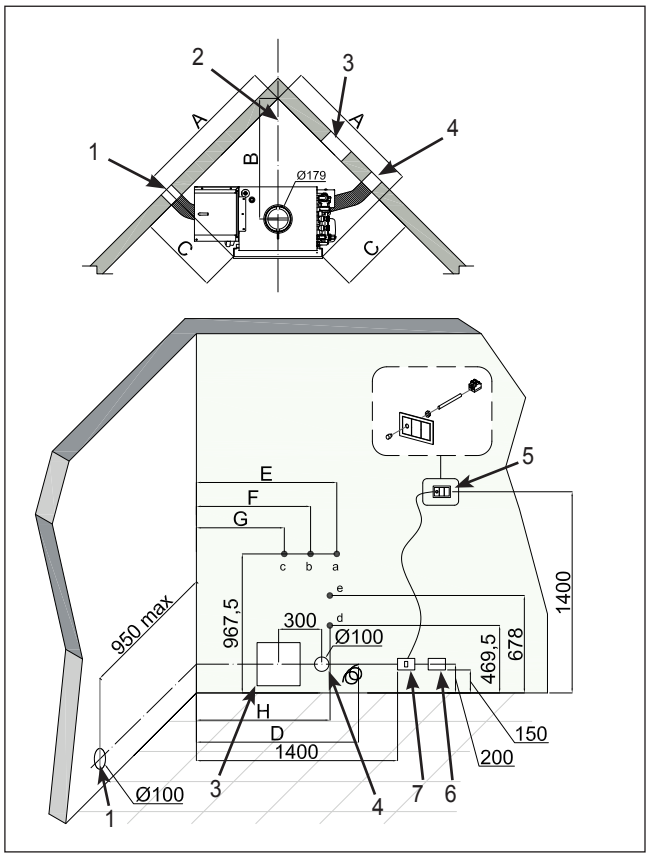
As per the fuel product exhaust system, air vents are also extremely important and must be given the appropriate consideration and respect.
The installer is directly liable for all electrical system parts, generation hook-up to the system, ventilation and the fume exhaust system and MUST, at the end of installation work, issue a declaration of conformity as per Ministerial Decree 37/08.
On the other hand, the purchaser MUST assign all work to a qualified professional technician.
The device must be installed and used in accordance with all local and national laws and EC Regulations.

WARNING

It is not allowed to install coaxial systems for the smoke output.

07.3 PREARRANGEMENT FOR CONNECTIONS AND AIR INLETS OF THE STOVE POSITIONED IN A CORNER

WARNING Electrical connections must be carried out by skilled personnel according to the regulations in force (2014/30/UE and 2014/35/UE).



a. Mains water inflow for thermal discharge 3/4”
b. Pressure relief valve discharge 3/4” (If the safety valve is opened, be very careful as very hot water may be expelled)
c. Heating flow 3/4”
d. Heating return 3/4”
e. Mains water inflow for heating system 1/2”

1. Pellet burner fan ducting
2. Centre line
3. Outside air inlet 200x200 mm
4. Ducting of wood secondary combustion air
5. Ambient temperature or ambient thermostat probe
6. Power supply 200 V 50 Hz
7. Omnipolar switch

All measurements are in mm.

The fireplace can work by taking the combustion air from the installation room or directly from the exterior environment. In the first case, air exchange must be guaranteed in the installation room through an external air intake **3**, in the second case, the air must be channelled to the fireplace by connecting combustion air intakes **1** and **4**; in this case, the external air intake **3** will no longer be required. Make sure the external air intakes are never blocked. For firewood-pellet Foghet stoves it is mandatory to have the three doors indicated in chap. 07.5 to permit loading pellets, servicing the pellet burner and the plumbing kit. The floor have to be strong enought to hold the machine in case it is not fitting the requirements than take necessary actions (ex. charge distribution plate). The machine has to be installed to be easely cleaned, smoking pipes and chimney easely reached and cleaned too please install accordingly. The expansion vase has to be correctly calculated therefore check if the one available is big enought for your installation**; if this is not the case, it must be dimensioned or another added, according to requirements.**

THE DESCRIPTION FOR THE PREPARATION OF THE AIR INTAKES IS VALID FOR THE FIREPLACE VERSION AND FOR THE STOVE VERSION.

NOTE The A, B, C, D, E, F, G, H heights are to be taken/calculated according to the position of the fireplace and the type of cladding.

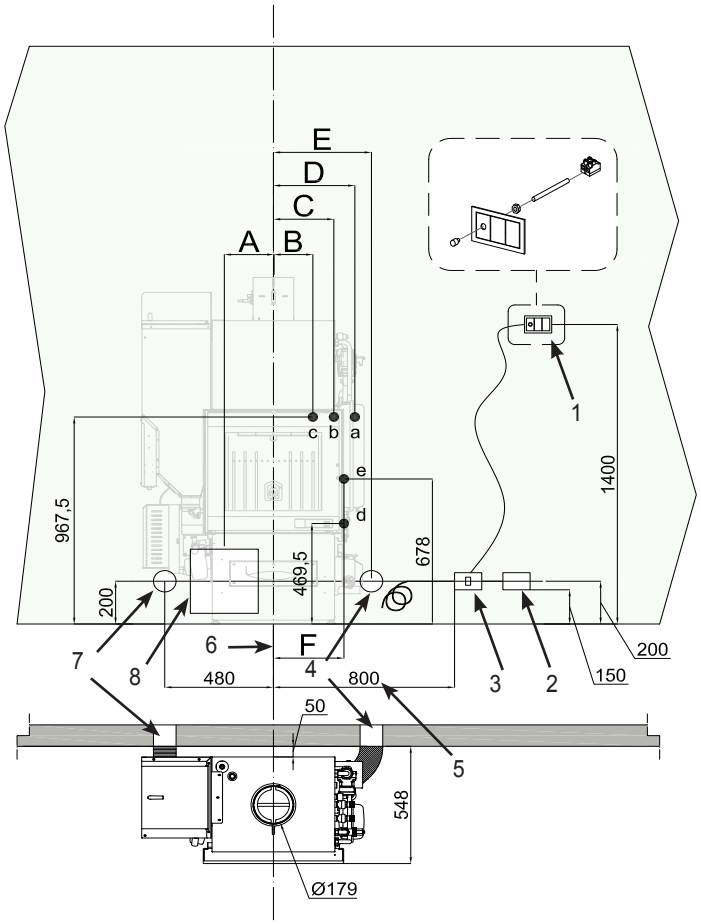
07.4 PREARRANGEMENT FOR ELECTRICAL CONNECTIONS AND AIR INLETS WITH WALL INSTALLATION

WARNING Electrical connections must be carried out by skilled personnel according to the regulations in force (2014/30/UE and 2014/35/UE).

a. Mains water inflow for thermal discharge 3/4”
b. Pressure relief valve discharge 3/4” (If the safety valve is opened, be very careful as very hot water may be expelled)
c. Heating flow 3/4”
d. Heating return 3/4”
e. Mains water inflow for heating system 1/2”

1. Ambient temperature or ambient thermostat probe
2. Power supply 220 V 50 Hz
3. Omnipolar switch
4. Ducting of wood secondary combustion air
5. Measure without bench
6. Centre line
7. Pellet burner fan ducting
8. Outside air inlet 200x200 mm

All measurements are in mm.



The fireplace can work by taking the combustion air from the installation room or directly from the exterior environment. In the first case, air exchange must be guaranteed in the installation room through an external air intake **8**, in the second case, the air must be channelled to the fireplace by connecting combustion air intakes **7** and **4**; in this case, the external air intake **8** will no longer be required. Make sure the external air intakes are never blocked. For firewood-pellet Foghet stoves it is mandatory to have the three doors indicated in chap. 07.5 to permit loading pellets, servicing the pellet burner and the plumbing kit. The floor have to be strong enought to hold the machine in case it is not fitting the requirements than take necessary actions (ex. charge distribution plate). The machine has to be installed to be easely cleaned, smoking pipes and chimney easely reached and cleaned too please install accordingly. **The expansion vase has to be correctly calculated therefore check if the one available is big enought for your installation; if this is not the case, it must be dimensioned or another added, according to requirements.**

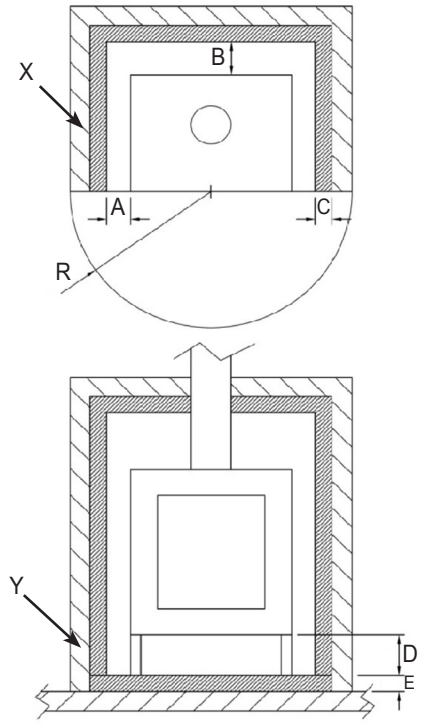
THE DESCRIPTION FOR THE PREPARATION OF THE AIR INTAKES IS VALID FOR THE FIREPLACE VERSION AND FOR THE STOVE VERSION.

NOTE The A, B, C, D, E, F heights are to be taken/calculated according to the position of the fireplace and the type of cladding.

Installation distances from flammable materials

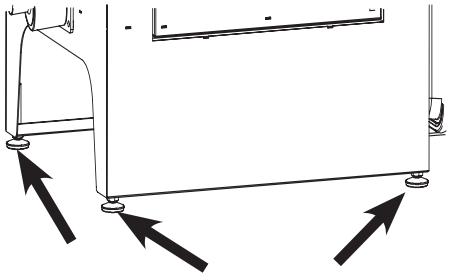
- Straight Distance from flammable side walls:
  A=100 mm
- Straight Distance from flammable rear walls:
  B=100 mm
- Insulation Thickness for side/ rear walls:
  C=80 mm
- Straight Distance from flammable floors:
  D=400 mm
- Floor Insulation Thickness (Silicate Calcium High Temperature proof ASTM C 533 TYPE II):
  E=40 mm
- Min. straight Front Distance from flammable materials:
  R= 700 mm

X= Flammable Wall
Y= Flammable floor



• Adjusting the feet

After preparing the flue and all the electrical and plumbing connections and air intakes, as described in the previous pages, position the fireplace and level it, adjusting the feet with a 19 mm wrench



• Installing the cladding: PRECAUTIONS

- **Protection of domestic walls**

  Installation of the fireplace near inflammable walls is only allowed if you maintain the distances indicated below, or if suitable protection is interposed. The surfaces such as the flooring, ceiling and walls of the home in the vicinity of the fireplace must be protected to prevent overheating. Insulating panels must be overlapped to avoid leaking. The sizes and types of insulation depend on the type of surface being protected.

- **Insulation types**

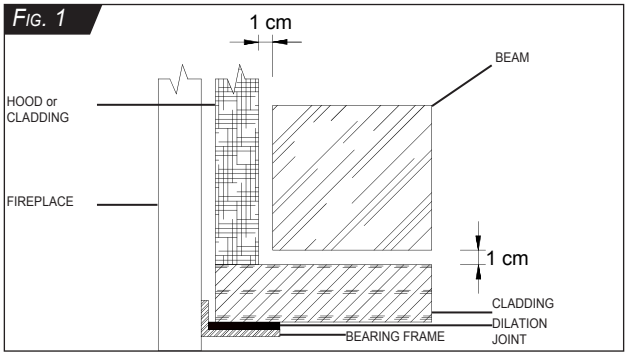
  Insulation can be made of various materials: mineral fibre, ceramic fibre, rock wool, and can come in different forms: sheets, mattresses. Its specific weight must be equal or greater than 245 kg/m3 with a temperature threshold of about 1,000°C, and thermal conductivity of l (400°C) <= 0,1 W/m3 . This material must be coded “AGI Q132” or “DIN 18895”.

  If the material used is not inside any walls, it is advisable to fasten it to the entire wall surface, to prevent the fibres from being dispersed into the air.

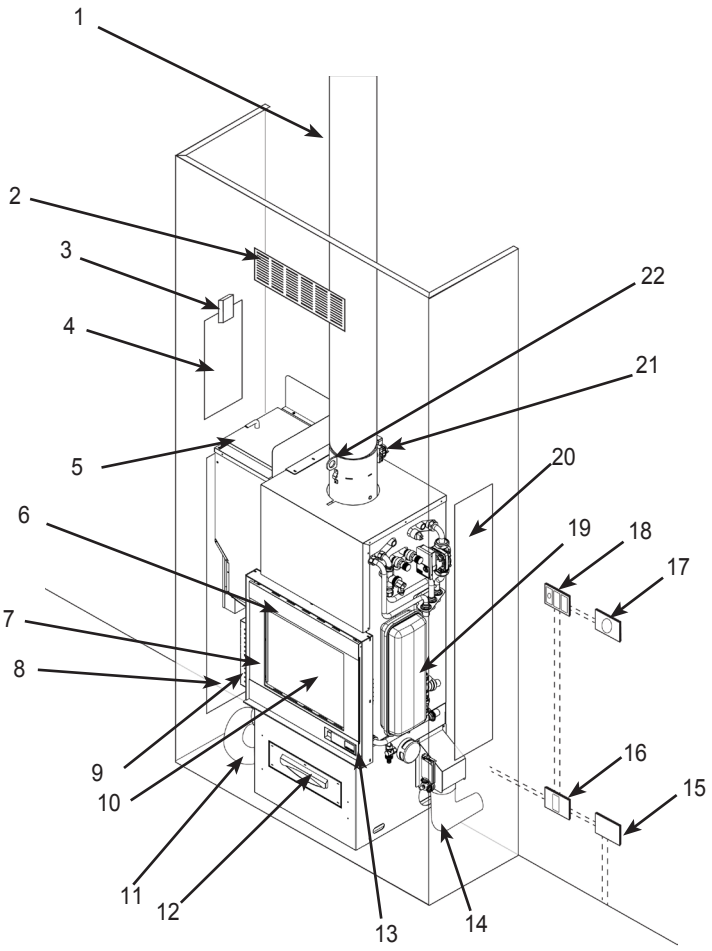
- **Beam**

  The beam can be fitted in front of the fireplace cladding maintaining a distance of at least 10 mm so that the space between it and the fireplace does not create accumulation of heat. The beam must not be inside the fireplace irradiation field (see FIG. 1)

FIG. 1



07.5 EXAMPLE OF INSTALLED AND CLAD FIREPLACE



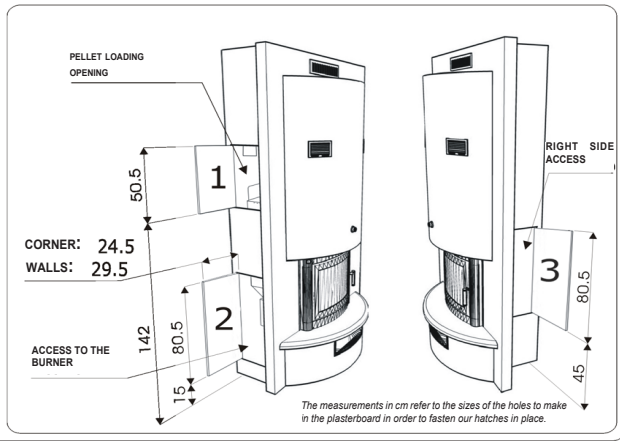
1. Fume exhaust
2. Hood front circulation grille 40x10 cm upper edge 10 cm from ceiling
3. Control panel
4. Inspection door for pellet loading REQUIRED. (refer to the ATTENTION box for details on dimensions)
5. Pellet hopper
6. Smoke baffle
7. Door
8. Inspection door REQUIRED for burner group. (refer to the ATTENTION box for details on dimensions)
9. Burner JOLLY MEC
10. Boiler
11. Pellet burner fan suction ducting
12. Ash pan
13. Door handle
14. Ducting of wood secondary combustion air
15. Power supply 220 V-50 Hz
16. Omnipolar switch
17. Room thermostat (optional)
18. Room temperature probe for controller (stand out 2 mm from wall edge)
19. Plumbing kit
20. Inspection door for Hydraulic kit REQUIRED. (refer to the ATTENTION box for details on dimensions)
21. Automatic shutter actuator
22. Lifting hook

WARNING

It is compulsory to foresee inspection hatches in the cladding for servicing and, in the combined models (Wood/Pellet) to load the pellets.

MANDATORY OPENINGS

FOGHET MODEL	DOOR
WOOD ONLY	3
WOOD & PELLET	1 2 3



NOTE

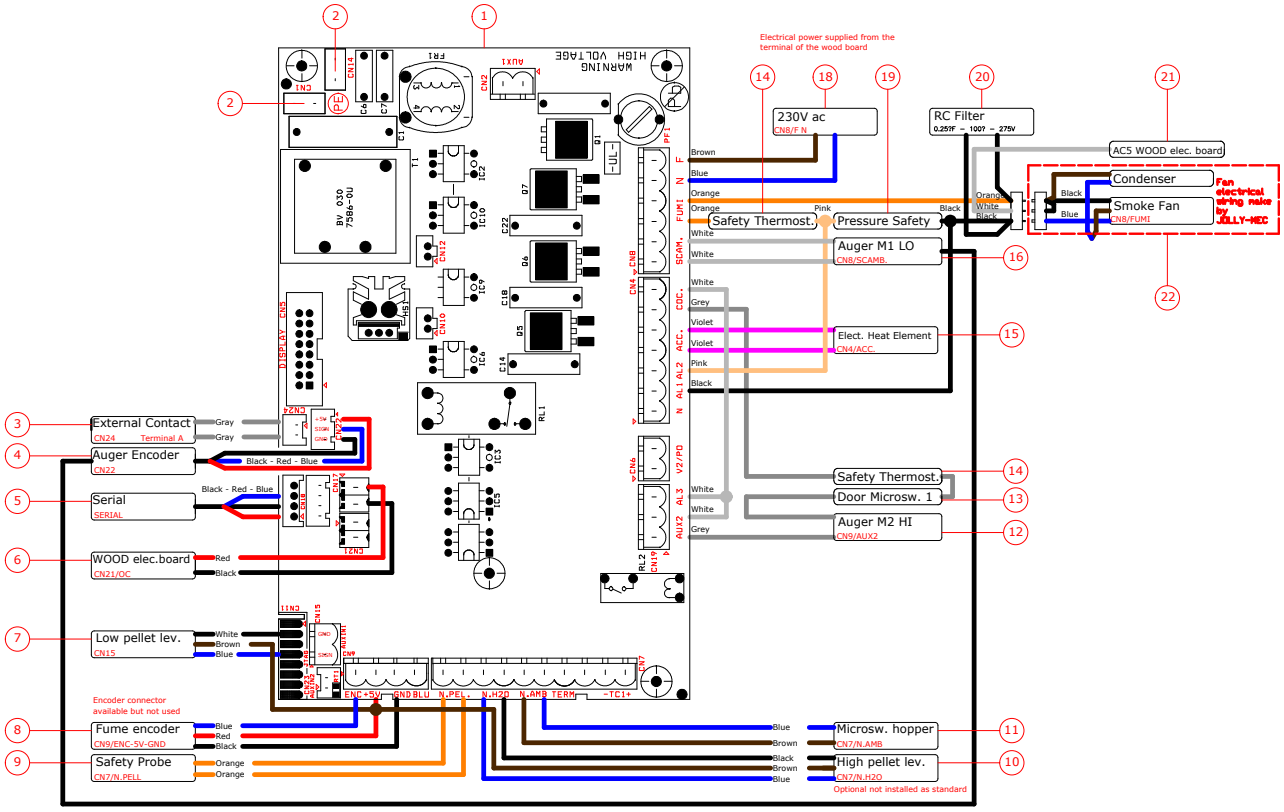
To allow boiler expansion the cladding must always be separated from the steel fireplace by 2 to 3 mm.

07.6 CONTROL UNIT ELECTRICAL WIRING DIAGRAM

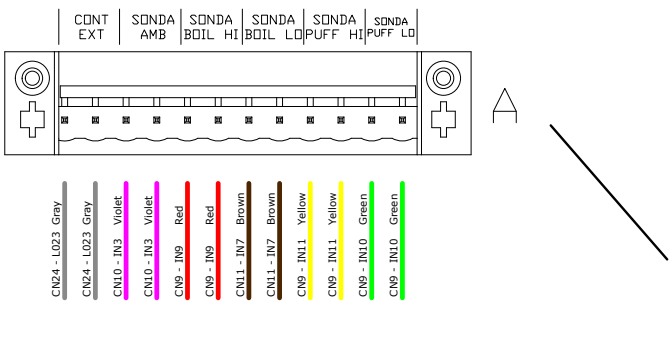
WARNING

Electrical connections must be carried out by skilled personnel according to the regulations in force (2014/30/UE and 2014/35/UE).

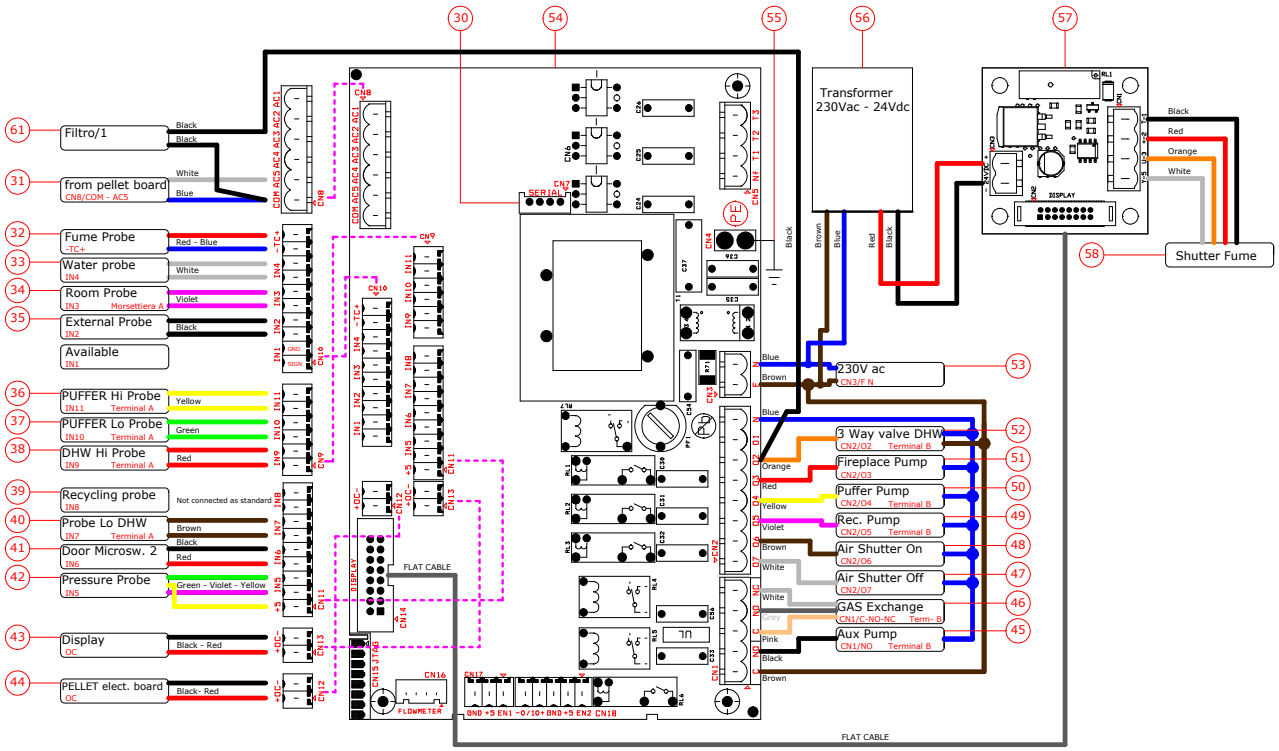
CBL/123 wiring scheme colours for PELLET electronic board



Wiring scheme colour



CBL/123 wiring scheme colours for WOOD electronic board



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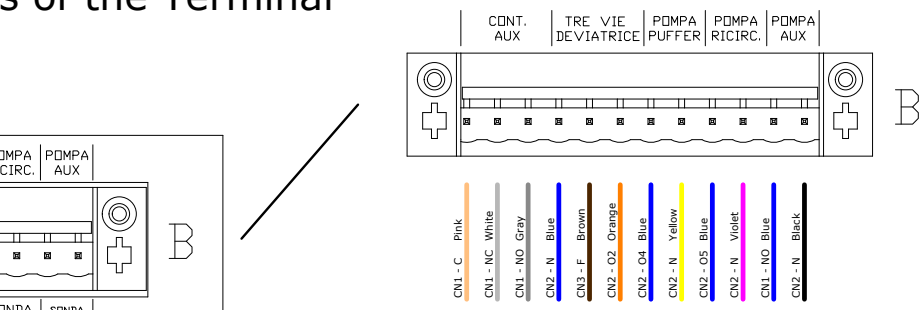


NOTE

The representation of the components is approximate, but they can change in terms of shape.

Following is a list of electrical components in the layout on the previous page

- **PELLET ELECTRONIC BOARD**

TABLE OF COMPONENTS	
POSITION	**DESCRIPTION**
1	Pellet combustion control electronic board
7	Pellet level probe input
9	Safety temperature probe input
10	High pellet level probe input (OPTIONAL)
11	Pellet hopper lid position microswitch input
12	High pellet auger gear motor M2
13	Closed door position Microswitch 1
14	Bipolar safety thermostat with manual reset
15	Pellet start-up electric resistance
16	Low pellet auger gear motor M1
19	Safety pressure switch
20	Combustion fan condenser filter
22	Combustion fan

- **WOOD ELECTRONIC BOARD**

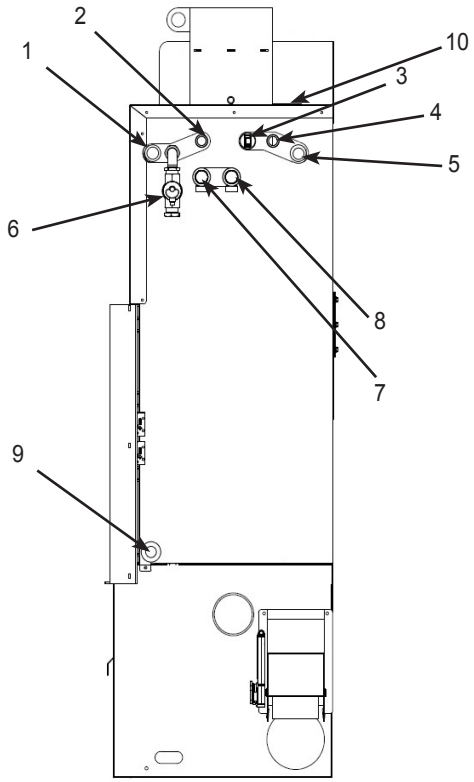
TABLE OF COMPONENTS	
POSITION	**DESCRIPTION**
32	Fume temperature probe input
33	Fireplace water temperature probe input
34	Room temperature probe input
35	External temperature probe input
36	Puffer high temperature probe input
37	Puffer low temperature probe input
38	Boiler high temperature probe input
39	Recirculation temperature probe input
40	Boiler low temperature probe input
41	Closed door position microswitch 2
42	Fireplace water pressure transducer
47	Air shutter closed position connection output
48	Air shutter open position connection output
51	Fireplace pump connection
52	Output for three-way diverter valve connection for domestic hot water boiler
54	System and wood combustion control electronic board
57	Fume motorised shutter control electronic board
61	RC filter for 3 way valve

07.7 HYDRAULIC KIT

Foghet Evo comes with a standard closed tank hydraulic kit already assembled and tested, but can also be supplied with a basic hydraulic kit fitted with safety devices only.

- **Basic Hydraulic kit**

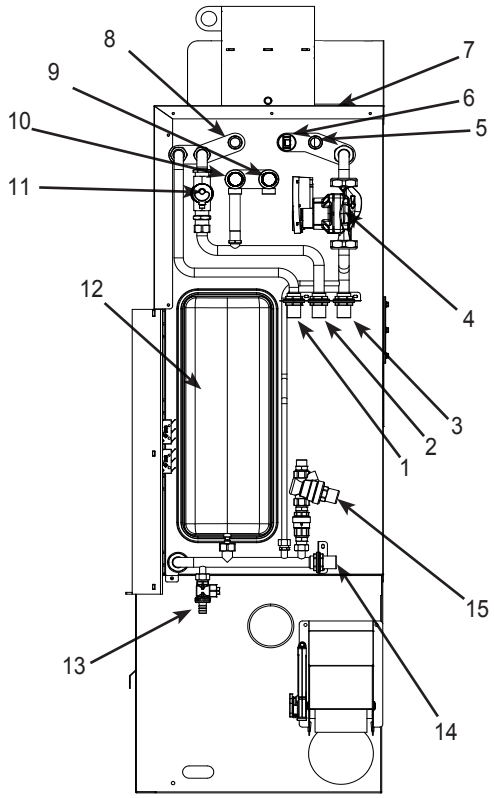
The basic hydraulic kit consists of the following components:



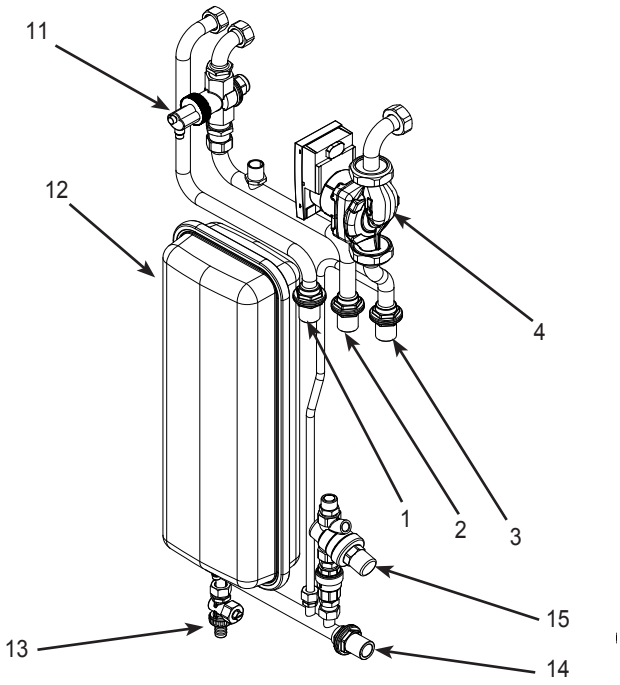
1. Cold water inlet for cooling serpentine (mandatory connection)
2. Thermal discharge valve probe
3. Pressure transducer
4. Boiler hot water temperature probe holder trap
5. Hot water delivery to the system (mandatory connection)
6. Thermal discharge valve (mandatory connection)
7. 2.5 bar pressure safety valve (mandatory connection)
8. 3.5 bar pressure safety valve
9. Hot water return flow from the system; filling and emptying of hot water (mandatory connection)
10. Venting valve

- **Complete Hydraulic kit**

The complete hydraulic kit consists of the following components:



1. Cold water inlet for cooling serpentine (mandatory connection)
2. Discharge pipe safety devices (mandatory connection)
3. Hot water delivery to the system (mandatory connection)
4. Circulation pump
5. Boiler hot water temperature probe holder trap
6. Pressure transducer
7. Venting valve
8. Thermal discharge valve probe
9. 3.5 bar pressure safety valve
10. 2.5 bar pressure safety valve (mandatory connection)
11. Thermal discharge valve (mandatory connection)
12. Expansion tank
13. Boiler drain
14. Hot water return flow from the system (mandatory connection)
15. Cold water inlet to fill the boiler (mandatory connection)



1. Cold water inlet for cooling serpentine (mandatory connection)
2. Discharge pipe safety devices (mandatory connection)
3. Hot water delivery to the system (mandatory connection)
4. Circulation pump
11. Thermal discharge valve (mandatory connection)
12. Expansiona tank
13. Boiler drain
14. Hot water return flow from the system (mandatory connection)
15. Cold water inlet to fill the boiler (mandatory connection)

WARNING

The installation operator is obliged to check that the closed expansion tank, supplied with the appliance, has a capacity which is suitable for the system it will be connected to. For medium/large systems, a heat technician should inspect and calculate the needs of the rooms to be heated according to current regulations.

WARNING

1-1.2 bar cold pressurised water must always be in the device.
Topping up pressure is automatic. The main cold water inlet must always be left open for automatic topping up of the boiler and cooling serpentine.

• High Efficiency circulator

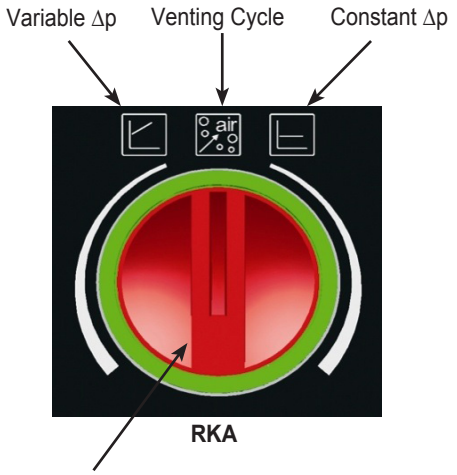
The appliance is fitted with a high-efficiency circulator that generates low energy consumptions with an energy saving of about 60% compared to a traditional circulator.

The heater system engineer can choose from two operating modes:

- Constant pressure mode
- Variable pressure mode

Conforming to EU energy saving regulations which will come into force in 2015. ErP-2015.

The figure below represents a detail of the high efficiency circulator.



RKA

Red Knob to adjust the position of Variable Δp, Venting cycle and the Constant Δp

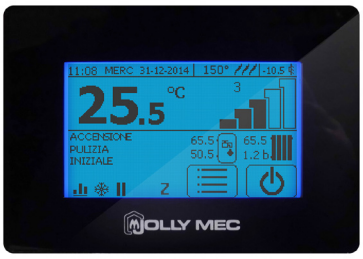
Pump led colour key:

LED	DESCRIPTION OF FUNCTIONS
Off	Circulator not connected to the mains.
Flashing green	With the vertical knob in air position, for ten minutes the pump performs high speed operating cycles alternating with stand-bys to bleed the air from the system.
Green - Red Flashing	Electrically powered pump at a standstill. It may be under powered T<160V or over powered T>253V. The engine thermal protection may have tripped due to overheating.
Flashing red	Blocked Pump. Switch off and then switch the pump back on, if the problem persists check the cause of the blocking or replace the pump.
Green	Standard operations.

CHAP.08 USE AND MAINTENANCE FOR THE USER

08.1 CONTROL UNIT

The electronic control unit controls all appliance functions and is controlled via a touch screen display.



The display allows you to view the main system parameters, set the desired operating parameters, set the start-up and switch off times and view any malfunction alarms.

NOTE

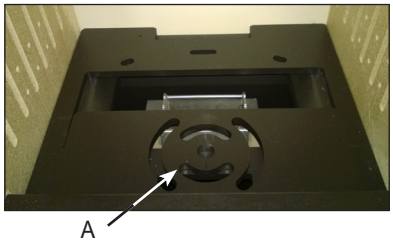
For a full and detailed description of the content in this section, see the enclosed manual SM097 EN

08.2 FIRST START-UP

- Remove all the documentation and accessories from the fireplace.
- Read the user instructions on fuel and other related aspects very carefully.
- The commissioning service has to be done by a specialised Technical Service Center. All claddings must be dry to prevent cracks or damage.
- During first start-up, the combustion chamber temperature must be increased slowly, then load the maximum quantity of wood to create complete combustion to reach high temperatures.
- Unpleasant odours are produced the first time the fireplace is lit. There are absolutely no health risks. This is why it is necessary to make sure there is sufficient ventilation in the installation room.

08.3 PELLET FUNCTIONING

Before lighting the pellet fireplace, a few preliminary operations are necessary:



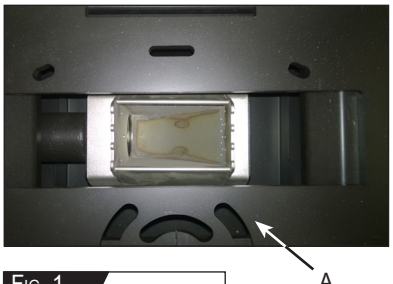


FIG. 1

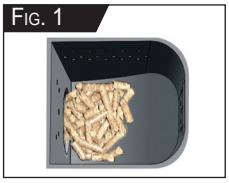


FIG. 2

1. Move the cast iron grate (**A**) over the pellet burner.
2. Clean the fire bed and burn pot and empty the ash pan.
3. Make sure the pellets pot is well positioned (see pag. 32).
4. Make sure the ash pan and the door are properly closed
5. Check that the electronic controller is set to pellet mode, otherwise the fireplace will not light
6. If the electronic controller is in wood mode, set it to pellet mode.
7. Check that there are pellets in the hopper, otherwise top up with pellets of the recommended type (if the pellets are below the level of the sensors, the fireplace will not light). Make sure the pellet hopper is firmly closed, otherwise the pellet load consent, provided by the micro fitted under the cover, will be inhibited.
8. The PELLET LOAD function is only to be performed prior to first start-up and only when the pellet in the hopper is finished. Never light the fireplace if the quantity of pellets is more than that indicated in *FIG. 1*.

In all other cases, DO NOT LOAD MANUALLY (PELLET LOAD function), because it is done automatically.

Now press the ON button to start the ignition phase.

On pressing the button for lighting, the electronic controller AUTOMATICALLY feeds the burn pot with pellets up to 2 cm below the rim (*FIG. 2*); the electrical element then starts the pellet igniting stage. To achieve correct ignition, the amount of pellet, automatically loaded in the firebox during the ignition cycle, can be seen in *FIG. 2*

If the start cycle fails, perform the operations described in **CHAP.09 - FAULT DIAGNOSIS AND TROUBLESHOOTING**

Every 30 minutes the fireplace performs a 1–minute automatic cleaning cycle with minimum pellet charging and maximum combustion air level

The boiler water temperature sensor controls the burner. When the water reaches the set boiler temperature it switches to economy mode and restarts when the temperature inside the boiler decreases below the set limit.

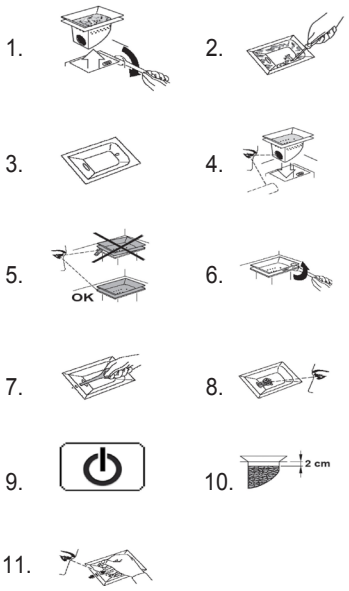
The water circulation pump is activated when the water in the boiler reaches the temperature set for the boiler, and it switches off when the boiler temperature decreases below the set value or the room-temperature thermostat or accumulation probe intervenes.

If, after a couple of hours of operation, the glass turns very black, or there is a leakage of pellets, or the fire goes out, this means that the pellets being used are not the recommended kind (for pellet characteristics see chap. 04.3), or there is insufficient combustion air (check the combustion fan is not dirty).
It is therefore necessary to carry out some corrective action to solve the problem (see attachment SM097 EN)

WARNING

Remember that the combustion fan pipe must not exceed 50 cm in length (see chap. 07.3-07.4).

For proper operation pellet combustion and to avoid problems, follow the instructions below. If working with pellet the fireplace/stove does not lit, please do the following instructions.



1. Remove the burn pot, loosening the locking screw with the wrench supplied or pliers.
2. Clean and scrape the sides, clean all the holes.
3. Clean the burn pot chamber.
4. Refit the burn pot, paying attention to the pellet feed hole.
5. Make sure the upper flange **is perfectly positioned on the support surface.**
6. Secure the burning pot with the locking screw using a wrench or pliers by always checking the pot is perfectly positioned on the support surface.
7. Using the special wrench or a nail, make sure the hole in the burn pot and the hopper is aligned.
8. Load manually until the pellets start to enter. Before pressing the ignition button make sure the burn pot is empty except for just a few pellets on the bottom.

   Never light the fireplace if there are more pellets (see Fig.1, pag.31)

   THE FIREPLACE can now be lit.
9. Start the device.

10 -11.On pressing the ignition button, the electronic controller AUTOMATICALLY loads pellets up to 2 cm below the rim of the burn pot; the electrical element then starts the pellet igniting stage.

WARNING

If the lighting cycle fails again, contact the specialised Technical Service Center.

08.4 WOOD FUNCTIONING

- **MAXIMUM FUEL QUANTITIES**

Wood:

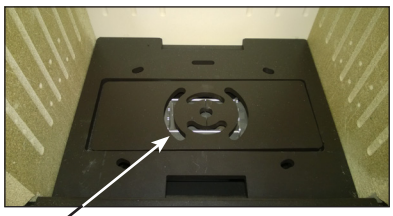
For power 15 kW: 3 blocks of approx. 1 kg each;

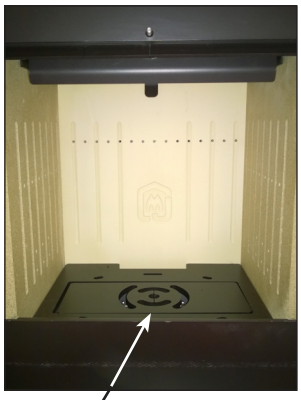
For power 8 kW: 2 blocks of approx. 1 kg each;

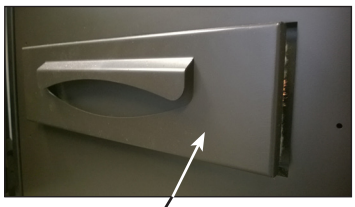
max length 35 cm and width approx. 6 cm per side (use of pieces of chopped wood is recommended)
The fireplace efficiency performance also depends on the flue draught.

- **START-UP AND FUEL SUPPLY**

To achieve optimal combustion the wood should be arranged correctly, in the size recommended by Jolly-Mec, create the temperature suitable for combustion and make sure there is the right amount of air to ensure ecological functioning and excellent output by the fireplace.
Before lighting the pellet fireplace, a few preliminary operations are necessary:







1. Clean the fire bed and empty the ash pan. It is recommended to always leave a small amount of ash on the fire bed.
2. Move the cast iron grate (**A**) over the pellet burner
3. Open the ash drawer (B) as far as the block .
4. Check that the controller is set to wood mode otherwise the fireplace will light in pellet mode;
5. Press the “start” button;
6. Load the wood (C) and switch the fire on following the instructions below:
   - position a row of wood logs in the centre of the combustion chamber.
   - position a piece of firelighter on the wood and switch it on.
   - **Never use alcohol, petrol, oil or other easily inflammable liquids.**
7. Close the door.

When the wood logs are almost burnt out, reload the fireplace again with a small amount of wood, leaving the ash pan open again
When the wood has burnt out and there are still some charcoal, add the maximum quantity of wood, or the amount required.

The fireplace’s capacity and the duration of the fuel are regulated by the quantity of combustion air.

- **COMBUSTION**

For this type of functioning, except when loading, the fireplace door must always be closed to ensure correct combustion, and to prevent combustion fumes from escaping into the room. **Disassembly or tampering with the closure, unauthorised by Jolly-mec, will cause invalidation of the warranty.**

If you open the fireplace door while it is functioning, to load wood or any other operation, it is compulsory to use protective gloves and perform such operations when there are only cinders in the fireplace and no actual flames.

Never open the door quickly, as this may cause fumes to escape.
Open the door slowly and just a little, before opening it completely.

Only add wood when there are cinders otherwise there could be a risk of combustion products escaping.

Never use larger quantities of wood than those recommended: **load a maximum of 2 blocks of wood (for model with nominal power 8 kW, D) or a maximum of 3 block of woods (for model with nominal power 15 kW, E) .**

To prevent less than optimal combustion, the ashes must be removed very carefully using the designated tool, so that the grid does not get clogged and the air supply can flow freely.

- **END OF COMBUSTION**

(This applies even when the system is switched off)
This phase is reached when the wood has burnt out and there is no combustion with or without flames.

WARNING

Before loading the final wood, make sure you move the ash from on top of the grid using the poker, to allow propagation of the pellet flame; the burner can operate provisionally with the grid above the brazier.

NEVER LIGHT THE FIREPLACE IN WOOD MODE WITHOUT CONNECTING IT TO THE MAINS.

- **AUTOMATIC START IN WOOD MODE WITH PELLET FEED**

WARNING

PERFORM THE AUTOMATIC START IN WOOD MODE WITH PELLET FEED ONLY WHEN THE FIREPLACE IS COLD.

FIG. 1

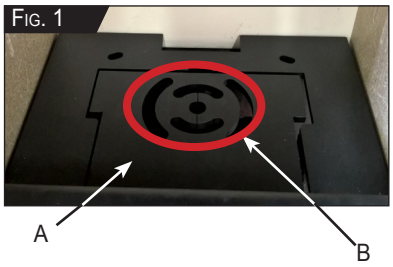


FIG. 2

FIG. 3

FIG. 4

1. Clean the fire base.
2. Check that the pellet firebox is thoroughly clean.
3. Move the cast iron grate (**A**) over the pellet burner. The central hole (B) of the cast iron grate must not be blocked by previously burnt ashes.
4. Make sure the pellet tank is full.
5. Check that the control unit is set to wood mode and is switched OFF.
6. Arrange the wood as described below.
   Load a MAXIMUM of 5 blocks of wood measuring 5 cm x 5 cm in section (see *FIG.3*). Arrange two blocks of wood measuring 5 cm x 5 cm in section on the fire base (*FIG.2*) so as to create a supporting surface for the wood used to ignite the fire (the two support blocks must be arranged as seen in *FIG.2* without closing the central hole (B) in the grate). The arrangement of the wood blocks (5 cm x 5 cm in section) seen in *FIG.3* must ensure that there is at least a couple of centimetres between one block and another, as seen in the top-down view image in *FIG.4* and they must be positioned on the two support wood blocks.
   DO NOT POSITION THE THREE BLOCKS OF WOOD SEEN IN FIG.3 DIRECTLY IN CONTACT WITH THE FIRE BASE GRATE. ALWAYS USE TWO BLOCKS OF WOOD TO SUPPORT THEM (*FIG.2*).
7. Close the door.
8. With the fireplace in WOOD mode and OFF, press and hold the ON-OFF button on the display until the confirmation screen appears. If you intend to ignite the fireplace press the ENTER button (in the bottom right hand corner), otherwise press ESC (in the bottom left hand corner) to cancel.

Pressing the ENTER button will start the pellet ignition phase and ignite the wood. Once the pellet ignition phase has been started it cannot be interrupted; even if you press the ESC button the fireplace will complete the wood ignition phase and switch to wood mode ON status.

Opening of the door during the pellet and wood ignition phase will trigger the fireplace alarm. Do not open the door during the ignition phase.

WARNING

Before igniting the pellet and/or wood and pellet after an alarm has been triggered, it is necessary to CLEAN THE FIREBOX, i.e. to turn on the fireplace with a clean firebox.
After resetting the alarm, switch the fireplace OFF. Before the fireplace switches OFF, a CLEAN BRAZIER message will appear; after cleaning the firebox, press the OK button to reset the message.

On completing the ignition process, the fireplace will remain in wood mode and it will be possible to continue the combustion in the modes described in the previous page.

08.5 OPTIMISING COMBUSTION AND DAMPER USE

This fireplace/boiler offers excellent performance. When using pellets, for optimum operation without overloading the burner respect the following rules:

FIG. 1

FIG. 2

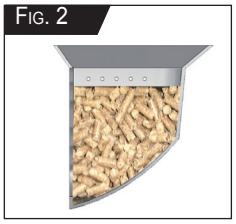


FIG. 3

Step 1: manually load a small amount of pellets via the control unit display command (see FIG. 1) for first start-up. Do not exceed the recommended quantity and make sure the burn pot is secured by forcing it with the special screw.

Step 2: carry out lighting. At the end of automatic loading, in the electrical element lighting stage, the quantity of pellets must never exceed the level indicated (vedi *FIG. 2*) in order to avoid abnormal ignition.

Step 3: set the control unit to maximum power; adjust the comburent air and pellet value to 0%. The flame should be as in *FIG. 3*. While burning, the pellets must always remain below the upper holes of the burn pot and the flame must be clear.

Step 4: when any unburnt elements are left in the firebox, run one or more automatic firebox cleaning cycles using the relative function on the control unit display.

Step 5: in case of incorrect combustion or lighting problems, clean the burn pot, following the procedure in the quick reference notice.

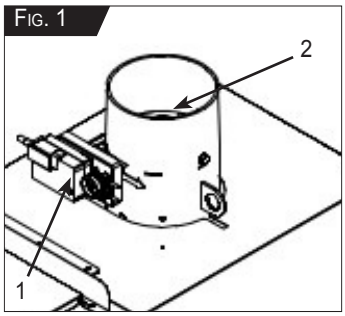
Step 6: every 20 days or so, it is compulsory to extract the top diffuser to clean it. **The combustion air percentage (%) must not be set below -5% to avoid possible spontaneous combustion, dirtying the boiler excessively and blackening the glass**

- **Using the damper**

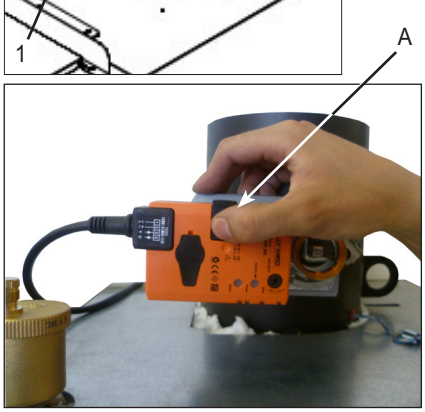
The fume shutter allows the combustion to be correctly regulated according to the combustion temperature and the flue's uptake (which varies according to weather conditions). The position of the fume shutter is automatically regulated according to the temperature of the fumes. It is however possible to select the most suitable position for the shutter in manual mode, via the control unit. If there is a fault in the motor that regulates the shutter, it is possible to release the motor clutch pressing button (A) and block it using its lock (C). Rotate the shutter manually to the open position (B). Release the clutch button (C) so that the fume shutter remains in the open position.

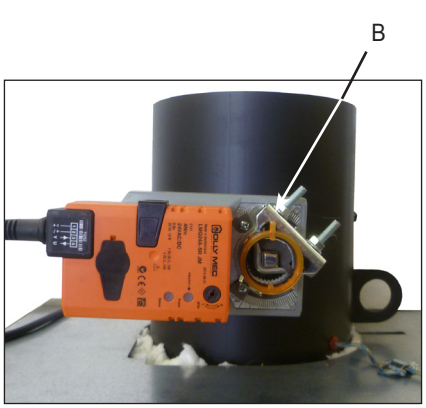
The user should become familiar with damper use in order to optimise fireplace operation

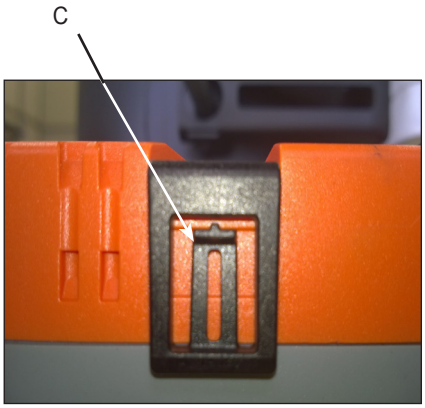
FIG. 1



1. Automatic shutter actuator
2. Damper







08.6 TIPS AND WARNINGS FOR THE USER

WARNING

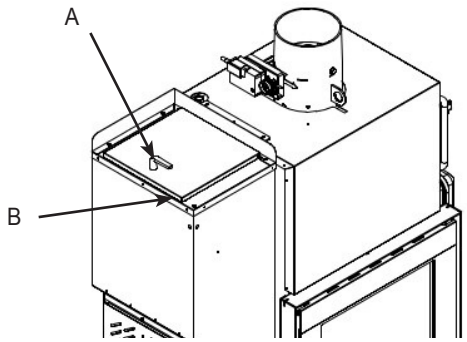
IT IS IMPORTANT THAT THERE IS ALWAYS WATER IN THE BOILER AT A PRESSURE OF 1 to 1.2 BAR WHEN COLD, AND THAT THE MAINS CONNECTION FOR THE WATER REQUIRED TO COOL THE FIREPLACE IS NEVER OBSTRUCTED.

With a zone heating system, when the fireplace/stove is lit, it is essential that at least one zone of the heating system is always open in order to dissipate the heat produced (also in summer).

The combustion fan must be cleaned at least once a year.

There must be no other boilers, chimneys, stoves, fireplaces or extractor blowers located in the same room as the stove (excluded of the type “C” according to UNI 10683).

When purchasing firewood, it is advisable to vary the sizes: short lengths (30/35 cm) for quick lighting and longer lengths. The greater the quality of the firewood, the greater its efficiency and operation.



To load the pellet hopper proceed as follows:

- Open the pellet hopper lid upwards using the handle (A).
- Fill the hopper with the recommended fuel (see par. 06.2).
- Replace the lid.

WARNING

The pellet hopper must remain closed when the fireplace is on. Given its airtight lid and relative safety microswitch (B), every time the door is opened for longer than 120 seconds, the fireplace running in pellet mode will shut down for safety reasons

If condensation forms inside the fireplace/stove, this may be caused by the following:

- the central heating circulating pump is set to start at too low a temperature (it should set to start at 60°C at the lowest). To keep the fireplace clean, it is also recommended to start the pump at about 70°C, if there are no contraindications concerning the functioning of the system.
- poor flue draught (clean the flue).
- Insufficient combustion air (increase the air by means of the combustion fan).
- boiler dirty: every 20-30 days, remove the smoke baffle and clean the fireplace, particularly around the upper part where it is connected to the flue. Use the flue brush to clean up as far as the damper.

If the glass turns black during normal burning, this may be caused by the following:

- poor flue draught (clean the flue or check that the flue dimensions conform to requirements).
- Insufficient combustion air (increase the air by means of the combustion fan).
- excessive amount of wood during start-up and when functioning (when operating in wood mode).
- quantity of pellets in the burn pot (this varies depending on the type of pellets used) is different from that given in the technical data (cap. 06.1). Check that, at medium power, the hourly pellet consumption; In case of ignition with a quantity of pellets higher than the one indicated on chap. 08.3, contact the specialised Technical Service Center.

If pellets have not been used for a long time (usually in the spring-summer), the hopper, in feed screw and burn pot must be completely emptied with the aid of a vacuum cleaner. Then clean thoroughly to remove all pellet residue, which could become compacted and block the in feed screw or damage parts the next time the fireplace is ignited.

Never light the stove/fireplace in wood mode without connecting it to the mains.

Only use recommended fuels, otherwise the warranty will be invalidated.

Every 500-1000 kg of pellets loaded into the hopper, check that there is no build up of sawdust on the bottom; if necessary, remove all the sawdust (sawdust reduces the capacity of the in feed screw and creates operating problems for the appliance).

The fireplace must always be closed, except when loading fire wood, to prevent smoke escaping. If you leave the door open when functioning, the alarm will be triggered and the fireplace will shut down.

WARNING

Check for any obstructions in the flue and the outside air inlets before lighting the appliance after a long period of disuse.
For this same reason, check that there are no leaks in the hydraulic circuit, due to extreme weather conditions (such as ice), which may have damaged the pipes or seals.

The firebox, the kind of installation of the hydraulik kit and or hydraulic installation cannot be modified; **any unauthorised modification automatically invalidates the warranty and relieves the Manufacture of any liability.**

The stove must not be placed in direct contact with combustible materials; the minimum distance allowed is 20 cm at the sides and back and at least 70 cm at the front.

Regular systematic maintenance is essential to maintain the appliance in perfect working order and optimum efficiency.

MORE CLEANING = MORE EFFICIENCY

This is a high performance insert obtained by closed doors. In case of opening and no perfect draftl conditions in the chimney (12Pa), there could be smoke puff exit. If the door is opened and the flue draught is not optimal (12 Pa), small puffs of smoke may occasionally occur. If, for example, it is necessary to open the door to load some wood, check that you have opened the fume shutter as far as possible (this takes 5-10 seconds) to prevent the formation of small puffs of smoke, then open the door.

WARNING

On exceeding the temperature of 90°C by the water in the boiler, the valve opens that allows cool mains water to flow into the safety serpentine, to cool the excess heat and keep the heat generator in safety condition. Pay attention to the safety valve exhaust on the hydraulic kit outlet, as very hot water could escape.

WARNING

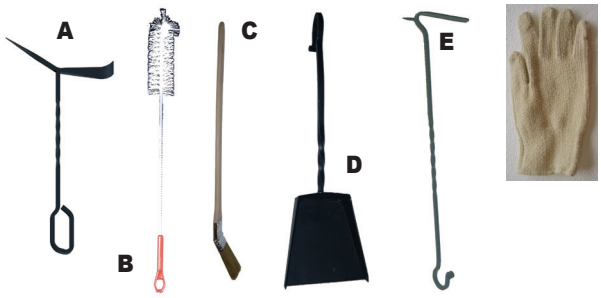
DO NOT TOUCH any parts of the firebox not covered by the cladding, except the handles and controls, as they can become very hot.

WARNING

In case of problems related to the device, contact the specialised Technical Service Center.
Call the Fire Brigade if a fire occurs in the flue.

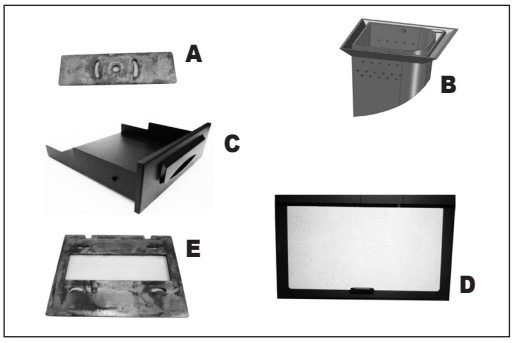
08.7 ORDINARY MAINTENANCE (by the costumer)

WARNING Before starting any type of cleaning, switch off the main switch and make sure that the appliance is cold. Never restart the stove before completing these operations and correctly reassembling all components.



Cleaning tools supplied

- **A)** Burn pot cleaning tool
- **B)** Flue brush
- **C)** Small brush
- **D)** Shovel
- **E)** Poker
- **F)** Glove



Parts to be cleaned

- **A)** Cast iron grate
- **B)** Pellet burn pot
- **C)** Ash pan
- **D)** Smoke baffle
- **E)** Fire bed

Initially, for a few days during operation with pellets, check the burn pot to determine how often it needs cleaning. Before any cleaning, always turn off the main switch and make sure the fireplace is cold.

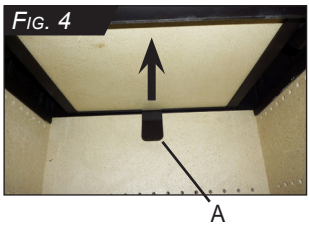
Fig. 1

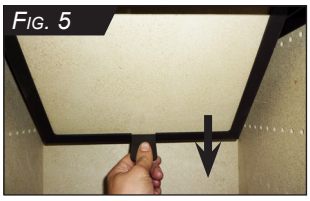
Fig. 2

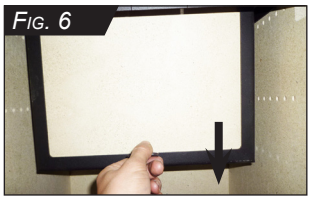
Fig. 3

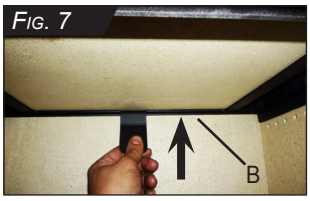
1. Opening the combustion chamber door

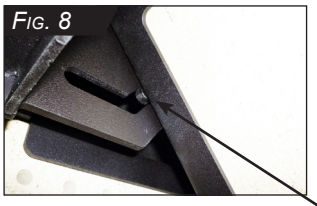
To open the combustion chamber door, grasp the handle (*Fig. 1*) and rotate it until it locks in place (*Fig. 2*).
Open the door and, to leave it completely open, open it to 90 degrees.
To close the door, push it gently with the handle open.
When the door is resting on the device, the handle will remain open by 45° (*Fig. 3*). To close the door completely, push the handle as far as possible.

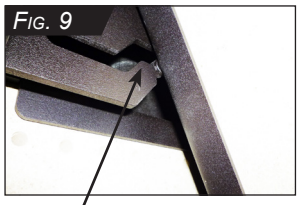












C

2. Cleaning of the fume deflector

Every 20 days, or even more frequently according to the type of fuel used, the flue chimney draught and the weather conditions, it is compulsory to remove the upper diffuser and clean it to prevent the fume outlet from clogging, causing the fumes to flow back into the room.

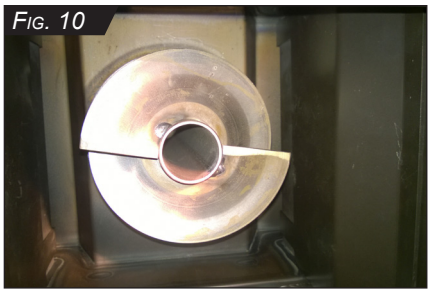
Remove the fume deflector following the instructions below:

a). Release the deflector from its seat (*FIG. 4*), located on the panels, pulling it towards the front using the relative indentation (**A**).

b). Rotate it downwards so the ash falls into the fireplace, from where it can be removed (*FIG. 5*) and (*FIG. 6*).

c). Replace the deflector on the rear panel (**B**), so that the indentation comes into contact with the panel, preventing accidental falls (*FIG. 7*).

For more thorough cleaning of the boiler (according to use) it is possible to completely remove the deflector from its seat: repeat phases a-b described above, then push it backwards until it is released from the side guides (**C**) (*FIG. 8*) and (*FIG. 9*).



3. Cleaning the turboclean

The turboclean (*FIG. 10*) should be cleaned every couple of months when there is insufficient combustion or fumes escaping from the door.

a) open the fumes deflector;

b) Release the fumes deflector (*FIG. 8* and *FIG. 9*)

c) Use a tool to shake the turboclean in the flue.

If very dirty, remove the turboclean, lifting it by a few centimetres and rotating it by 90 degrees. Remove it from the flue and use a brush to remove the ash.

4. Cleaning the burn pot

Removing the burn pot after loosening the locking screw with the special wrench. Carefully clean all the air holes in the burn pot with a pointed tool. **Make sure the burn pot support is clean** (if the burn pot is not correctly positioned and air escapes, the fireplace will not light or operate properly; smoke could also enter the pellet hopper). Position the burn pot correctly, pushing it to the left by means of the locking screw located on the right side of the burn pot container (make sure to tighten the screw).

5. Cleaning the ash pan

Empty periodically when necessary.

The ash drawer is fitted with a safety shutdown system to prevent unauthorised openings. Lift up the tray to remove it, while, to put it, simply push it into its seat (*FIG. 11*).

NOTA: During normal functioning, check that the ash drawer is closed.

6. Cleaning the glass

When using the fireplace in pellet mode, clean the glass every day with a damp sponge or a paper towel. If the glass becomes dirty with black smoke, clean the burn pot or increase the combustion air. When operating in wood mode, use specific products.
Be careful not to use overly aggressive products to avoid ruining the paint. Never spray detergents directly onto the parts to be cleaned. If the fireplace requires more frequent cleaning, check the flue draught and make sure the smoke baffle is clean (the minimum draught must be 12 Pascal; do not use the fireplace if the draught is less than the specified value).

7. Cleaning the fireplace body

Remove the cast iron grate and the firebox. Open the deflector to remove any deposited ash. Remove it to access and clean the upper part of the fireplace.
Use a brush to shake the turboclean in the flue.
To remove the turboclean, lift it slightly, rotate it by 90 degrees and slide it out; clean it if necessary allowing the ash and soot to fall into the ash pan. Empty the ash pan and carefully clean the box.
If necessary, use a vacuum cleaner to remove soot and ash.
Clean the pellet burn pot with a wire brush and a pointed tool. Refit all parts correctly.

8. Cleaning the flue

Routine flue cleaning depends on the draught, fireplace use, weather conditions and the type of wood or pellets used.
It is mandatory to clean the flue every year, by a specialised technician once a year, in autumn before lighting the fireplace.

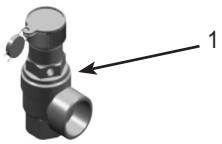
9. Cleaning the pellet hopper

Every 500-1000 kg of pellets burned, empty the hopper and remove any sawdust deposited on the bottom. Carefully clean the bottom of the hopper.
In case of long idle periods, empty the hopper and the in feed screw.

10. Cleaning the fans

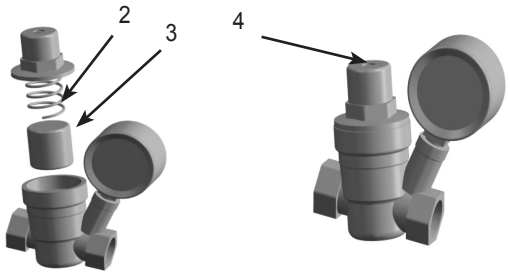
Once a year remove the combustion fan and remove all dust and dirt from the blades.

• COMPONENTS OF HYDRAULIC KIT SUBJECT TO ROUTINE MAINTENANCE



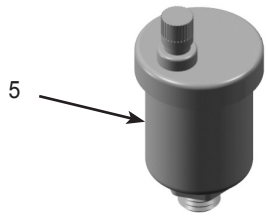
11. Pressure relief valves

The safety valve (1) needs venting annually.



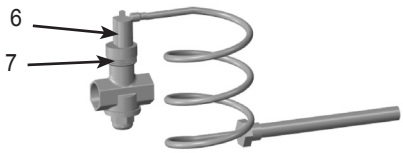
12. Pressure reducer with pressure gauge

For annual cleaning of the filter, remove the cap **(2)** using a pipe wrench, extract the filter**(3)**, clean it and replace it. Regulate the pressure (1.0÷1.2 Bar) using the screw (4).



13. Jolly bleed valves

Use the Jolly venting valve (5) to vent the air from the system in the presence of air bubbles.



14. Temperature relief valve

Button (6) is to be used to manually vent the temperature relief valve in the event of loss of water due to boiling and operation without water. Nut (7) to be slackened off in the event of water loss (maximum 1/2 a turn) and monitored thereafter.

15. Expansion tank

Check once a year that the prefill pressure is 1.5 bar.

08.8 SCHEDULED PREVENTIVE MAINTENANCE (To be done by a specialised Technical Service Center)

WARNING

EACH YEAR YOU SHOULD CLEAN ANY DEPOSITS IN THE BOILER. THIS CLEANING SHOULD BE DONE ONLY IF YOU HAVE THE ABILITY AND COMPETENCE TO BE ABLE TO PERFORM, OR CONTACT A QUALIFIED TECHNICIAN.

Carefully follow the sequences:

- ABSOLUTELY clean the chimney
- Switch off power, unplug the stove from the main electric network.
- Drain the fireplace with the appropriate drain valve, after closing the water entry from the network and the tap on the return system.
- Remove the drain valve placed behind the smokes exhaust.
- Remove all probes mounted.
- Extract the bulb of the heating exhaust valve.
- Fully open the damper and ashtray.
- Turn on the stove with little wood (max 2 kg / hour) for about 2 hours.
- Leaving the fire extinguish by himself.
- Do not let the walls to clean cool down below 50 ° C and proceed with the wire brush to remove all deposits, both in compartment fire, the top of the fireplace.
- The boiler must be clean as new.
- Check that the fireplace is completely cool.
- Replace the various components following the dismounting instructions in the reverse order.
- Open valve for water inlet and the valve on the return system and check that the pressure does not exceed 1.5 bar.
- Switch on normally the stove.

Twice a year:

- Remove the deflector
- Remove the flue gas pass elements.
- Remove the turboclean
- Use a brush to clean the removed components and the interior walls of the boiler.

WARNING

To carry out these operations, the appliance must be disconnected from the mains; wait until the appliance is cold and comply rigorously with the safety regulations in force

CHAP.09 FAULT DIAGNOSIS AND TROUBLESHOOTING

09.1 PROBLEMS

WARNING

In accordance with the laws in force on safety for electrical appliances, a specialised Technical Service Center or qualified personnel must obligatorily be contacted for all installation, maintenance or interventions that require access to electrical parts.

PROBLEM	CAUSE AND/OR CURE
The electronic controller does not switch on	• Check for possible power supply or mains problems. • Check that the green connector of the display is correctly connected at the rear. • The electronic controller is faulty. • Check the ON/OFF key. • Check the socket fuse.
No pellets enter the burn pot	• The electronic controller is in wood mode. Select pellet mode. • The pellets are finished, refill the hopper. • Damp pellet blocked into the gear motor
The in feed screw does not rotate	• The in feed screw is blocked by pellets that are too hard (only use pellets of the recommended type). **Contact the specialised Technical Service Center.** • The gear motor is not powered (check and eliminate the causes). • The gear motor does not turn even though powered (remove the gear motor, free the in feed screw with a screwdriver and refit the gear motor). • The motor turns but the in feed screw does not move. Replace the gear motor (broken gears).
The stove does not light automatically in pellet mode	• The burn pot is dirty. Clean it thoroughly and refit correctly. • The burn pot is not correctly positioned. Reposition and clamp it, tightening the locking screw with the special wrench supplied • The electrical element is faulty; replace the electrical element. In the meantime, light the appliance manually using firelighters (or similar products).
The pellets burn poorly forming incompletely combusted residue in the burn pot, the glass gets very dirty and turns black	• The quantity of pellets fed into the burn pot at the various power levels does not comply with that given in the Technical Data. (see chap. 06.2). Check and correct. • Insufficient flue draught (do not use the fireplace, it could be dangerous). Clean the flue and the fireplace thoroughly. • Pellet burn pot dirty. Clean it. • Burning pot in a wrong position. • Pellets damp. Replace with dry pellets. • Insufficient combustion air; check that the combustion fan pipe is unobstructed and clean the fan. • Insufficient combustion air setting. **Contact the specialised Technical Service Center.** • Too much wood has been loaded. • Combustion chamber is still cold; it has not been allowed to warm up during start-up, before proceeding with an optimal output load.
At minimum power, the fireplace always goes off because not enough pellets are fed	• Too much sawdust on the bottom of the hopper. Empty the hopper and refill with new pellets. (every 500-1000 kg of pellets loaded, empty the hopper and remove all the sawdust deposited on the bottom).
At minimum power, the fireplace always goes off because too many pellets are fed and do not burn	• Increase the combustion air. • **Contact the specialised Technical Service Center.**
Smoke escapes when the door is opened, the pellets burn poorly, or the glass gets dirty (particularly when used with wood)	• If the fireplace is installed in a room in communication with a stairwell, with major depression that exists in the local, close off the stairwell by installing a door. • There are other appliances that use room air, creating low pressure. Use the fireplace when the other appliances are off (excluded of the type “C” according to UNI 10683).

PROBLEM	CAUSE AND/OR CURE
	• The outside air inlets and/or the flue are partially or completely obstructed. Clean or remove the obstructions. Air inlet and/or canalisations not correctly done. • Insufficient flue draught: there are horizontal sections or 90° bends, or the chimney cap is located under the ridge of the roof (installation errors). Sostituire i tratti orizzontali con percorsi a 45°; replace the horizontal sections with sections at 45°; raise the chimney cap, or fit an antiwind cap. • Check that the flue conforms to the indications given in **CAP. 07.1**, clean the flue and smoke baffle, open the damper, open the door slowly.
Excessive condensation forms inside the fireplace	• The temperature at which the pump starts is set too low; increase the temperature setting.
The circuit breaker releases	• When the fireplace is first used, or after a long period of disuse, condensation may form in the igniter; carry out one or more manual cleaning operations by way of the controller to dry out the condensation in the igniter, or light the stove manually.
The radiators do not get hot even if the water in the boiler is hot and the pump is running	• There is air in the system; bleed all the radiators, the pump and the boiler.

NOTE

For a detailed list of alarm messages, see the enclosed manual SM97 EN.

NOTES

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