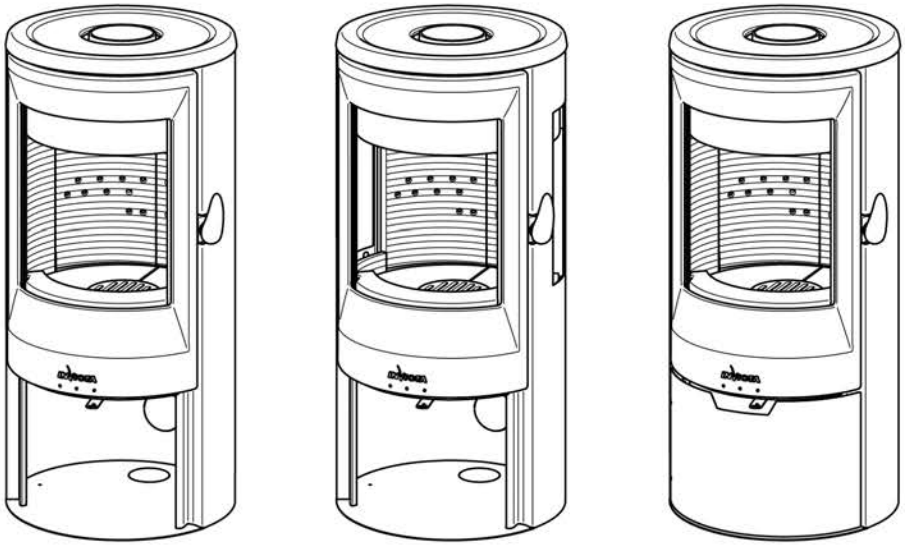
INVICTA

CE

EN

DIRECTIONS FOR INSTALLATION USE AND MAINTENANCE



NEOSEN PLUS / 3V PLUS / ETANCHE PLUS

WOOD STOVES
WITH A SYSTEM OF NATURAL CONVECTION

THESE INSTRUCTIONS ARE INTEGRAL PART OF THE PRODUCT
PLEASE READ CAREFULLY AND SAVE FOR FUTURE REFERENCE

Serial number

***

Copy translated from the original

Foreword

- **Congratulations on your purchase of a INVICTA product, one of the best available on the market!**
- Before installing and operating your appliance, read this instruction manual carefully and save it for future reference.
- All installation, inspection, maintenance and repair work must be performed by authorized and qualified technicians only.
- It is recommended that the first-time lighting of your appliance should be done by the appliance installer who may check and ensure proper appliance operation and draught.
- This appliance can be used by children aged 8 years or older and by people with reduced physical, sensory or mental capabilities or without experience or knowledge, if adequately supervised or if instructions relating to the use of the appliance in complete safety have been delivered to them and whether the associated risks have been perceived.

WARNING: All cleaning of the various parts must be done when the appliance is completely cold and disconnected from the electrical power source. Cleaning and maintenance operations to be carried out by the user cannot be done by unattended children.

- Never let your appliance unattended in the presence of children. Do no let the children touch any hot surface areas of the appliance nor let them operate it.
- This appliance is designed and arranged to operate with the fuels, fuel moisture content, fuel loads, fuel charge intervals, chimney draught, and form of installation indicated in this manual. Failure to follow these suggestions may cause problems with the appliance (deterioration, life, etc.) that will not be covered by the warranty.
- Aiming at a continuous improvement, the MANUFACTURER reserves the right to make changes without prior notice.
- For any further information or requests always contact an authorized dealer who will be pleased to assist you.

Symbols used in this manual

In the present instruction manual some indications are pointed out by the following symbols:

 Safety precautions.

 Prohibited operation.

 Important information.

INVICTA (hereinafter referred to as the "MANUFACTURER" assumes no responsibility for any incidental or consequential damage to people, things or pets resulting from the inobservance of the prescriptions given in this manual, particularly of those marked with following symbols.

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1 GENERAL INFORMATION

1.1 Warranty

1.1.1 Warranty conditions

The marketed Products comply with regulations applicable in France and their performances are compatible with non-professional uses.
Non-professional consumer Customers (hereinafter "Consumers") automatically benefit from the legal guarantee of conformity and the legal guarantee against hidden defects free of charge.
In addition, and independently of the legal guarantees, they benefit from a commercial guarantee.

A. Legal guarantees

A.1 Legal guarantee of conformity

INVICTA GROUP undertakes to deliver the Consumer goods that comply with the contractual description and the criteria set out in Article L217-5 of the French Consumer Code.
It is liable for non-conformities existing at the time the Products are delivered and which appear within two years of the delivery.
This guarantee period applies without prejudice to Articles 2224 et seq. of the French Civil Code, with the prescription period starting to run on the day the Consumer becomes aware of the non-conformity.
Non-conformities which appear within a period of twenty-four months from the delivery of the Products are, unless proven otherwise, considered to have existed at the time of delivery.
If a non-conformity is found, Consumers may demand that the delivered Products be made compliant by repair or replacement, failing which the price can be reduced or the sale be cancelled in accordance with the legal conditions.
They may also suspend the payment of all or part of the price or the remittance of the benefit provided for in the contract until INVICTA GROUP has met its obligations under the legal guarantee of conformity under articles 1219 and 1220 of the French Civil Code.
It is up to the Consumer to request the upgrade to conformity from INVICTA GROUP by choosing between repair and replacement.
The goods must be brought into conformity within a period not exceeding thirty days following the Consumer's request.
Proof of purchase of the Product (invoice, detailed sales receipt) and photos of the product will be required for the processing of any claim.
The repair or replacement of the non-compliant Product includes, where applicable, the removal and return of the Product and the installation of the repaired or replaced Product.
Any Product brought into conformity as part of the legal guarantee of conformity benefits from a six-month extension of this guarantee.
If the non-compliant Product has been replaced because, despite the Consumer's choice, INVICTA GROUP has not brought the Product into conformity, the replacement will reinitialise the legal guarantee of conformity period starting from the delivery of the replaced Product.
If the requested upgrade to compliance is impossible or entails disproportionate costs under the conditions provided for in Article L 217-12 of the French Consumer Code, INVICTA GROUP may refuse it. If the conditions provided for in article L 217-12 of the French Consumer Code are not met, the Consumer may, after formal notice, pursue the forced execution in kind of the solution initially requested in accordance with articles 1221 et seq. of the French Civil Code.
Finally, the Consumer may demand a price reduction or the cancellation of the sale (unless the non-conformity is minor) in the cases provided for by Article L 217-14 of the French Consumer Code.
When the non-conformity is so serious that it justifies a reduction in price or the immediate cancellation of the sale, the Consumer is not required to request the repair or replacement of the non-compliant Product first.
The price reduction is proportional to the difference between the value of the delivered Product and the value of the Product without the non-conformity.
If the sale is cancelled, the Consumer will be refunded the price paid after the return of the non-compliant Products to INVICTA GROUP, at the latter's expense.
The refund is made on receipt of the non-compliant Product or proof of its shipment by the Consumer and at the latest within the following fourteen days by means of the same payment method as the one used by the Consumer at the time of payment, unless the latter expressly agrees otherwise and in any case without any additional costs.
The above mentioned provisions are without prejudice to the possible award of damages to the Consumer for the loss suffered by the latter as a result of the non-conformity.

A.2 Legal guarantee against hidden defects
INVICTA GROUP is liable to the Consumer for hidden defects as part of the legal guarantee against hidden defects resulting from a material, design or manufacturing defect impacting the delivered products and rendering them unfit for purpose.
The Consumer may decide to implement the guarantee against hidden defects for the Products in accordance with Article 1641 of the French Civil Code; in that case, they may choose between the cancellation of the sale or a reduction of the sale price in accordance with Article 1644 of the French Civil Code.

A.3 Exclusion of legal guarantees
INVICTA GROUP cannot be held liable in the following cases:
- Non-compliance with the legislation of the country in which the Products are delivered, which it is the Consumer's responsibility to check before placing the order,
- Misuse, professional use, negligence or lack of maintenance by the Consumer, as well as in case of normal wear and tear of the Product, accident or force majeure.

B. Commercial guarantee applicable to Consumers
In addition to the aforementioned legal guarantee of conformity and against hidden defects, INVICTA GROUP offers a commercial guarantee reserved for Consumers (excluding all professional Clients) (hereinafter the "Commercial Guarantee"), subject to full payment of the invoice corresponding to the Product by the aforementioned Consumer, under the conditions and according to the durations described below.
In accordance with Article D.217-3 of the French Consumer Code, the insert attached to Article D.211-2 of the French Consumer Code is reproduced below, restating the main provisions of the legal guarantee of conformity:
The consumer has two years from the delivery of the goods to obtain the implementation of the legal guarantee of conformity if a non-conformity appears. During that period, the consumer is only required to prove the existence of the non-conformity and not the date it appeared.
When the contract for the sale of the goods provides for the supply of digital content or a digital service on a continuous basis for a period of more than two years, the legal guarantee applies to that digital content or digital service throughout the planned period of supply. During that period, the consumer is only required to prove the existence of the non-conformity of the digital content or service and not the date of its appearance.
The legal guarantee of conformity entails an obligation on the part of the professional, where applicable, to provide any updates needed to maintain the conformity of the goods.
The legal guarantee of conformity gives consumers the right to the repair or replacement of the goods within thirty days of their request, free of charge and without any major inconvenience to them.
If the goods are repaired under the legal guarantee of conformity, the consumer benefits from a six-month extension of the initial guarantee.
If the consumer requests the goods to be repaired but the vendor imposes replacement, the legal guarantee of conformity is renewed for a period of two years from the date the goods are replaced.
The consumer may obtain a reduction in the purchase price by keeping the goods or terminate the contract and obtain a full refund against the return of the goods, if:
1° The professional refuses to repair or replace the goods;
2° The repair or replacement of the good occurs after a period of thirty days;
3° The repair or replacement of the goods causes major inconvenience to the consumer, in particular where the consumer definitively bears the cost of the return or removal of the non-compliant goods, or if they bear the cost of installing the repaired or replaced goods;
4° The non-conformity of the goods persists despite the vendor's unsuccessful attempt to bring it to conformity.
The consumer is also entitled to a reduction in the price of the goods or to the termination of the contract when the non-conformity is so serious as to justify the immediate reduction in price or termination of the contract. The consumer is then not required to request the repair or replacement of the goods beforehand.
The consumer is not entitled to cancel the sale if the non-conformity is minor.
Any period of immobilisation of the goods for the purpose of repair or replacement suspends the guarantee that was still running until the delivery of the repaired goods.
The rights mentioned above result from the application of Articles L. 217-1 to L. 217-32 of the French Consumer Code.
A vendor who obstructs the implementation of the legal guarantee of conformity in bad faith is liable to a civil fine of up to EUR 300,000, which may be increased to 10% of the average annual turnover (Article L. 241-5 of the French Consumer Code).
The consumer also benefits from the legal guarantee against hidden defects under articles 1641 to 1649 of the French Civil Code for a period of two years from the discovery of the defect. This guarantee gives the right to a price reduction if the goods are kept or to a full refund in return for the return of the goods.

B.1 Territoriality
The Commercial Guarantee applies in all countries in which the Products are sold by INVICTA GROUP.

B.2 Content and duration
The Commercial Guarantee only applies to the following Products, excluding all others.

Heating appliances
At the end of the twenty-four (24) month period mentioned in article A.1 above, the heating elements (non-removable parts) are

guaranteed to Consumers, depending on the type of heating appliance they have purchased and according to the following periods:
- For the heating elements of wood burning stoves, fireplaces, inserts and ranges:
The Commercial Guarantee for these products will have a maximum duration of three (3) years, which will begin at the end of the twenty-four (24) month period mentioned in article A.1 above. In all cases, the Commercial Guarantee for these products will end on the fifth anniversary of the purchase of the product by the Consumer.
- For the heating elements of pellet stoves, fireplaces and inserts:
The Commercial Guarantee will only apply if the Products have been installed in a compliant manner and subject to verification of such compliance by the network of INVICTA GROUP authorised technical stations within 3 months of purchase. The Commercial Guarantee for these products will have a maximum duration of one (1) year, which will begin at the end of the twenty-four (24) month period mentioned in article A.1 above. In all cases, the Commercial Guarantee on these products will end on the third anniversary of the purchase of the product by the Consumer.
The Commercial Guarantee is limited to the free replacement of recognised defective parts after inspection by INVICTA GROUP. If the replacement of these parts proves too expensive, INVICTA GROUP may decide to replace the Product. Under no circumstances may INVICTA GROUP be the subject of a claim for damages, under any name or form whatsoever.
The costs of travel, transport, labour, packaging, dismantling and the consequences of immobilisation of the equipment resulting from guarantee operations, are borne by the Consumer.
The following heating appliance components are expressly excluded from the Commercial Guarantee:
• External removable parts,
• Normal wear and tear of the Product such as, for example, a change in appearance (colour, gloss) or corrosion, as well as of the steel of cast iron moving or fixed internal parts of the Product,
• The consequences of improper maintenance or lack of maintenance of the Product, an accident, negligence or error in handling the Product and, more generally, failure to comply with instructions for use and maintenance and, in particular, maintenance by qualified personnel,
• Since the glass withstands a temperature of 750°C and the temperatures in the combustion chamber never reach this temperature, there can be no breakage of the glazing due to overheating. As a result, glass breakage due to improper handling during use or handling of the appliance is not covered by the Commercial Guarantee,
• Seals for any heating appliance, crucibles for pellet stoves and spark plugs for pellet stoves and gas heaters are considered to be wear parts,
• As the fuel used and the operation of the appliance are beyond the manufacturer's control,
• The parts of the fireplace in direct or indirect contact with the igniting fuel, such as:
- Decorative plates, fire grates, deflectors, hearth log protections, inserts, wood stoves and hydros marketed under the INVICTA or DEVILLE brands,
- Decorative plates and deflectors for pellet stoves marketed under the INVICTA, or DEVILLE brands,
- Diffuser tubes, wicks, igniters, cast iron rings for stoves marketed under the INVICTA, or DEVILLE brand names,
- Refractory bricks, fire grates, deflectors for wood burning ranges marketed under the INVICTA, or DEVILLE brand names,
- Decorative plates and deflectors for gas heating appliances marketed under the INVICTA, or DEVILLE brands.
• The electrical parts (extractor, fan, electronic board) of pellet stoves marketed under the INVICTA or DEVILLE brands are only covered by the Legal Guarantee.
• The other components, such as:
- Latches, screws, fans, printed circuits, switches, terminals, electric wires, fireplace electric ducts, inserts, wood stoves marketed under the INVICTA or DEVILLE brands,
- Latches, screws, decorative plates, deflectors for pellet stoves marketed under the INVICTA or DEVILLE brands,
- Handles, screws, bricks, thermometers for wood burning ranges marketed under the INVICTA, or DEVILLE brand names.
The following are also excluded from the Commercial Guarantee:
• Any damage caused by mechanical or electrical components that are not supplied by the manufacturer of the Product and/or are prohibited by laws governing heating appliances.
• Damage caused by any use other than that intended for the Product concerned, in particular the use of any unauthorised fuels.
The Commercial Guarantee applies to any defect in material or manufacturing, subject to the non-professional, reasonable use of the appliance in accordance with the operating instructions provided with the appliance and any applicable regulations.
INVICTA GROUP is released from any obligation relating to the Commercial Guarantee in the event of Product installations that are not compliant with any legal, regulatory and/or administrative requirements and trade practices, or if the Product is altered.
The Commercial Guarantee does not cover any damage, whether total or partial, direct or indirect, caused by use that does not comply with the instructions for use and/or maintenance, is abnormal, negligent or incorrect, or results from a cause unrelated to the intrinsic qualities of the Product.
This Commercial Guarantee is excluded for professional use of the Product.
Proof of Product purchase (invoice, detailed sales receipt) and photos will be requested for the processing of any claims under the Legal Guarantee or the above mentioned contractual guarantee.
The Contractual Guarantee is only valid if the appliance has been installed at the address indicated on the guarantee certificate provided with the appliance and if the purchaser has registered the Product on the www.invicta.fr website or by calling the toll-free number 0.809.10.00.13 within 3 months of the purchase, it being specified that in all cases, the Consumer is required to

provide proof of purchase of the Product for the implementation of the Contractual Guarantee.

B.3 Transfer of the guarantee
The Commercial Guarantee is linked to the Product sold by INVICTA GROUP, it is automatically acquired by any new non-professional owner consumer for the remaining duration.

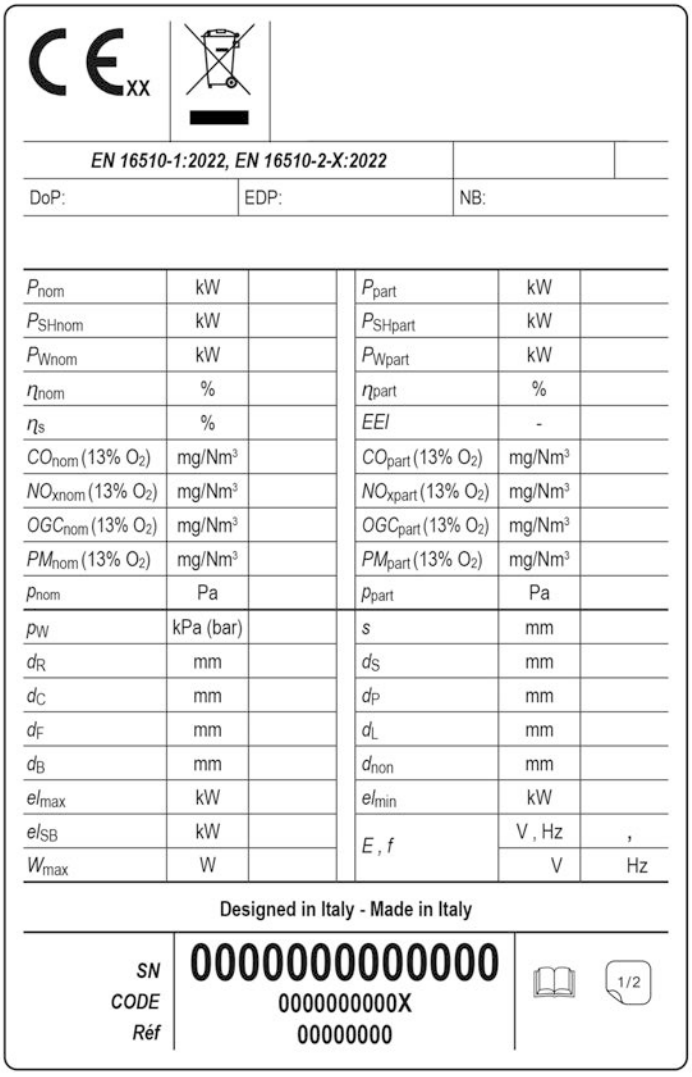
B.4 Price of the guarantee
The Commercial Guarantee as defined above does not entail any additional payment by the Consumer.

B.5 Immobilisation of the Product
Any period of immobilisation of the Product suspends the remaining guarantee period from the date of the Customer's request for intervention or from the date the Product is made available for replacement or repair if this starting point is more favourable to the Customer. The duration will also be suspended in the event of negotiations between the guarantor and the Customer with a view to an amicable settlement of the dispute.

B.6 Amicable settlement of disputes
In the event of difficulty in applying this guarantee, the Consumer has the possibility, before any legal action, to seek an amicable solution, in particular by contacting INVICTA GROUP's After-Sales Service.

1.1.2 CE label and product serial number

The serial number is printed on the cover of the appliance "installation, use and maintenance" manual. It is highly recommended that the serial number be quoted for any request.
This number is also printed at the bottom of the CE label located on the back side of the unit.



EN 16510-1:2022, EN 16510-2-X:2022

DoP: EDP: NB:

P_{nom}	kW		P_{part}	kW	
P_{SHnom}	kW		P_{SHpart}	kW	
P_{Wnom}	kW		P_{Wpart}	kW	
η_{nom}	%		η_{part}	%	
η_s	%		EEI	-	
CO_{nom} (13% O_2)	mg/Nm³		CO_{part} (13% O_2)	mg/Nm³	
NO_{xnom} (13% O_2)	mg/Nm³		NO_{xpart} (13% O_2)	mg/Nm³	
OGC_{nom} (13% O_2)	mg/Nm³		OGC_{part} (13% O_2)	mg/Nm³	
PM_{nom} (13% O_2)	mg/Nm³		PM_{part} (13% O_2)	mg/Nm³	
p_{nom}	Pa		p_{part}	Pa	
p_W	kPa (bar)		s	mm	
d_R	mm		d_S	mm	
d_C	mm		d_P	mm	
d_F	mm		d_L	mm	
d_B	mm		d_{non}	mm	
el_{max}	kW		el_{min}	kW	
el_{SB}	kW		E , f	V , Hz	,
W_{max}	W			V	Hz

Designed in Italy - Made in Italy

SN 0000000000000
CODE 0000000000X
Réf 00000000

1/2

Example of CE label with serial number

SYMBOLS	PLATE KEY
nom	data taken at rated power
part	data taken at reduced power
$P_{nom/part}$	Heat output
$P_{SHnom/part}$	Space heat output
$P_{Wnom/part}$	Water heat output
$\eta_{nom/part}$	Efficiency
η_S	Seasonal space heating efficiency at nominal heat output
EEI	Energy Efficiency Index
$CO_{nom/part}$	CO emissions (at 13% O_2)
$NO_{xnom/part}$	NO_x emissions (at 13% O_2)
$OGC_{nom/part}$	hydrocarbon emissions (at 13% of O_2)
$PM_{nom/part}$	particulate matter emissions (at 13% O_2)
$p_{nom/part}$	minimum flue draught
p_W	maximum operating pressure
s	thickness of protective insulating material
d_R	minimum distance to combustible materials - rear
d_S	minimum distance to combustible materials - side
d_C	minimum distance to combustible materials - ceiling
d_P	minimum distance to combustible materials - frontal radiation
d_F	minimum distance to combustible materials - front floor
d_L	minimum distance to combustible materials - lateral radiation
d_B	minimum distance to combustible materials - bottom
d_{non}	minimum clearance from non combustible materials
el_{max}	consumption of electrical auxiliary energy at nominal heat output
el_{min}	consumption of electrical auxiliary energy at part load heat output
el_{SB}	consumption of electrical auxiliary energy at standby
E, f	supply voltage and frequency
W_{max}	maximum electrical input
	read and follow the instructions for use

1.1.3 Remarks on materials

⚠ **The materials used to manufacture this product have been thoroughly checked and are guaranteed to be free from defects.**

The components below are subject to common wear and tear (corrosion or progressive decay) that cannot constitute grounds for objection due to the type and features of the materials used in the construction of the parts and due to the product operational conditions.

- The internal movable or fix parts in steel or cast iron: are made of high temperature resistant materials but could distort and settle if using the wrong fuel or exceeding the fuel amount suggested in this manual. However they can eventually present rusty or oxidized parts.
- Gaskets: are necessary to make the firebox airtight and to hold the ceramic glass panel in place; their distortion absorbency and elasticity will be guaranteed only by following the instructions under section 4.1.2 regarding the ceramic glass cleaning; mind that if the glass detergent trickles down the glass, the gaskets could harden letting the glass panel loose.

Misuse of the following components could result in their breakage.

- The ceramic glass panels: are thoroughly factory-checked. Please note that with the techniques currently available, the manufacturing of glass ceramic panels totally free from any kind of defects cannot be guaranteed and therefore any irregularities that might be noticed have to be considered within the specifications of this material and are not prejudicial to its strength nor to the correct functioning of the firebox. Note: Please refer to section 4.1.2 for directions on cleaning.

⚠ **Ceramic glass thermal shock resistance 750°C. It is important not to light the fire close to the glass to avoid its damage (white residue) in the long run.**

1.2 Certifications

1.2.1 Ecodesign 2022

ECODESIGN 2022

Language: ENG

INFORMATION REQUIREMENTS FOR SOLID FUEL LOCAL SPACE HEATER

Trademark:	INVICTA
Product type:	-
Model:	NEOSEN PLUS
Equivalent models:	-

Indirect heating functionality:	☑ no
Direct heat output:	8,0 kW
Indirect heat output:	0,0 kW

Fuels	*Preferred fuel [yes / no]*	*Other suitable fuel(s) [yes / no]*	*ηs [%]*	*Space heating emissions at nominal heat output*				*Space heating emissions at minimum heat output*			
				PM	*OGC*	*CO*	*NOX*	*PM*	*OGC*	*CO*	*NOX*
				mg/Nm³ (13%O₂)				*mg/Nm³ (13%O₂)*			
Log wood, moisture content ≤ 25 %	☑ yes	☑ no	71%	40	80	1500	200	X	X	X	X
Energy efficiency class:				A+							
Energy efficiency index (EEI):				107							

CHARACTERISTICS WHEN OPERATING WITH THE PREFERRED FUEL ONLY:

HEAT OUTPUT			
Nominal heat output	P_{nom}	8,0	kW
Minimum heat output (indicative)	P_{min}	N.a.	kW

USEFUL EFFICIENCY (NCV as received)			
Useful efficiency at nominal heat output	$\eta_{th,nom}$	81,0	%
Useful efficiency at minimum heat output (indicative)	$\eta_{th,min}$	N.a.	%

AUXILIARY ELECTRICITY CONSUMPTION			
At rated heat output	el_{max}	0,000	kW
At minimum heat output	el_{min}	0,000	kW
In standby mode	el_{SB}	0,000	kW

PERMANENT PILOT FLAME POWER REQUIREMENTS			
Pilot flame power requirement (if applicable)	P_{pilot}	N.a.	kW

TYPE OF HEAT OUTPUT or ROOM TEMPERATURE CONTROL		
Single stage heat output, no room temperature control	(F2)	0%

OTHER CONTROL OPTIONS		
Not applicable	(F3)	0%

Observe the specific precautions for installation, assembly and maintenance indicated in the manual accompanying the product

CONTACTS	ISSUED ON:	EMPOWERED PERSON:
Invicta Group Zone Industrielle Lieu-dit "La Gravette" - 08350 DONCHERY - FR Tél: +33 (0)3 24 27 71 71 www.invicta-group.fr | accueil@invicta-group.fr	05/09/2025	Ing. Andrea Tezza Technical Manager

ED2022 STATEMENT DRAWN UP ACCORDING COMMISSION REGULATION (EU) 2015/1185 AND COMMISSION DELEGATED REGULATION (EU) 2015/1186 OF 28 APRIL 2015 REV : 005_20250709

ECODESIGN 2022

Language: ENG

INFORMATION REQUIREMENTS FOR SOLID FUEL LOCAL SPACE HEATER

Trademark:	INVICTA
Product type:	-
Model:	NEOSEN 3V PLUS
Equivalent models:	-

Indirect heating functionality:	☑ no
Direct heat output:	8,0 kW
Indirect heat output:	0,0 kW

Fuels	*Preferred fuel [yes / no]*	*Other suitable fuel(s) [yes / no]*	*ηs [%]*	*Space heating emissions at nominal heat output*				*Space heating emissions at minimum heat output*			
				PM	*OGC*	*CO*	*NOX*	*PM*	*OGC*	*CO*	*NOX*
				mg/Nm³ (13%O₂)				*mg/Nm³ (13%O₂)*			
Log wood, moisture content ≤ 25 %	☑ yes	☑ no	71%	40	80	1500	200	X	X	X	X
Energy efficiency class:				A+							
Energy efficiency index (EEI):				107							

CHARACTERISTICS WHEN OPERATING WITH THE PREFERRED FUEL ONLY:

HEAT OUTPUT			
Nominal heat output	P_{nom}	8,0	kW
Minimum heat output (indicative)	P_{min}	N.a.	kW

USEFUL EFFICIENCY (NCV as received)			
Useful efficiency at nominal heat output	$\eta_{th,nom}$	81,0	%
Useful efficiency at minimum heat output (indicative)	$\eta_{th,min}$	N.a.	%

AUXILIARY ELECTRICITY CONSUMPTION			
At rated heat output	el_{max}	0,000	kW
At minimum heat output	el_{min}	0,000	kW
In standby mode	el_{SB}	0,000	kW

PERMANENT PILOT FLAME POWER REQUIREMENTS			
Pilot flame power requirement (if applicable)	P_{pilot}	N.a.	kW

TYPE OF HEAT OUTPUT or ROOM TEMPERATURE CONTROL		
Single stage heat output, no room temperature control	(F2)	0%

OTHER CONTROL OPTIONS		
Not applicable	(F3)	0%

Observe the specific precautions for installation, assembly and maintenance indicated in the manual accompanying the product

CONTACTS	ISSUED ON:	EMPOWERED PERSON:
Invicta Group Zone Industrielle Lieu-dit "La Gravette" - 08350 DONCHERY - FR Tél: +33 (0)3 24 27 71 71 www.invicta-group.fr | accueil@invicta-group.fr	05/09/2025	Ing. Andrea Tezza Technical Manager

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ECODESIGN 2022

Language: ENG

INFORMATION REQUIREMENTS FOR SOLID FUEL LOCAL SPACE HEATER

Trademark:	INVICTA
Product type:	-
Model:	NEOSEN ETANCHE PLUS
Equivalent models:	-

Indirect heating functionality:	☑ no
Direct heat output:	8,0 kW
Indirect heat output:	0,0 kW

Fuels	*Preferred fuel [yes / no]*	*Other suitable fuel(s) [yes / no]*	*ηs [%]*	*Space heating emissions at nominal heat output*				*Space heating emissions at minimum heat output*			
				PM	*OGC*	*CO*	*NOX*	*PM*	*OGC*	*CO*	*NOX*
				mg/Nm³ (13%O₂)				*mg/Nm³ (13%O₂)*			
Log wood, moisture content ≤ 25 %	☑ yes	☑ no	71%	40	80	1500	200	X	X	X	X
Energy efficiency class:				A+							
Energy efficiency index (EEI):				107							

CHARACTERISTICS WHEN OPERATING WITH THE PREFERRED FUEL ONLY:

HEAT OUTPUT			
Nominal heat output	P_{nom}	8,0	kW
Minimum heat output (indicative)	P_{min}	N.a.	kW

USEFUL EFFICIENCY (NCV as received)			
Useful efficiency at nominal heat output	$\eta_{th,nom}$	81,0	%
Useful efficiency at minimum heat output (indicative)	$\eta_{th,min}$	N.a.	%

AUXILIARY ELECTRICITY CONSUMPTION			
At rated heat output	el_{max}	0,000	kW
At minimum heat output	el_{min}	0,000	kW
In standby mode	el_{SB}	0,000	kW

PERMANENT PILOT FLAME POWER REQUIREMENTS			
Pilot flame power requirement (if applicable)	P_{pilot}	N.a.	kW

TYPE OF HEAT OUTPUT or ROOM TEMPERATURE CONTROL		
Single stage heat output, no room temperature control	(F2)	0%

OTHER CONTROL OPTIONS		
Not applicable	(F3)	0%

Observe the specific precautions for installation, assembly and maintenance indicated in the manual accompanying the product

CONTACTS	ISSUED ON:	EMPOWERED PERSON:
Invicta Group Zone Industrielle Lieu-dit "La Gravette" - 08350 DONCHERY - FR Tél: +33 (0)3 24 27 71 71 www.invicta-group.fr | accueil@invicta-group.fr	05/09/2025	Ing. Andrea Tezza Technical Manager

ED2022 STATEMENT DRAWN UP ACCORDING COMMISSION REGULATION (EU) 2015/1185 AND COMMISSION DELEGATED REGULATION (EU) 2015/1186 OF 28 APRIL 2015 REV : 005_20250709

1.2.2 Further certifications

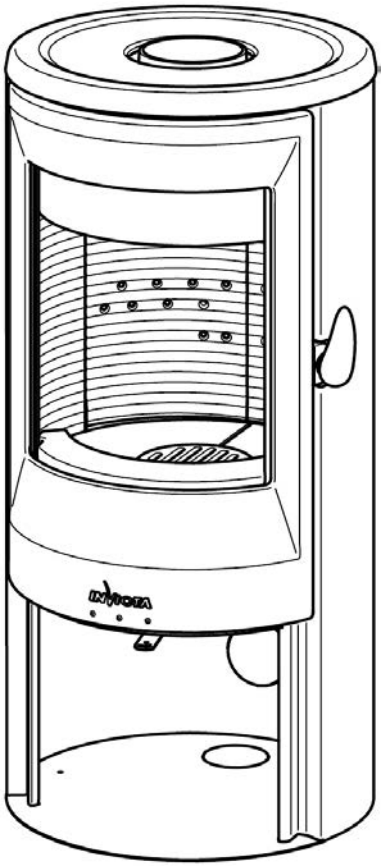
We declare that the appliances
NEOSEN PLUS - NEOSEN 3V PLUS - NEOSEN ETANCHE PLUS
comply with legislative provisions that implement the following directives and regulations:

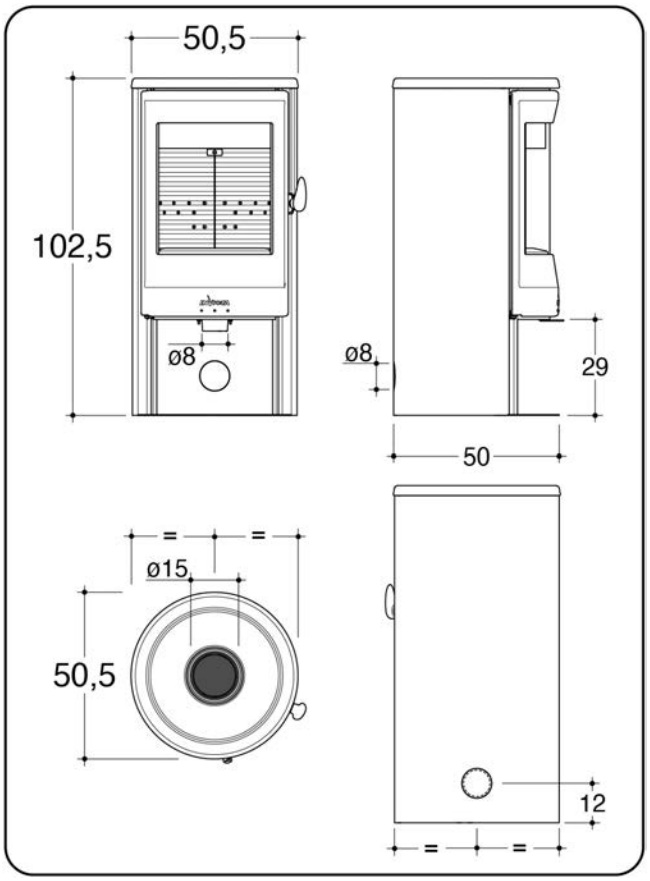
- **Regulation (UE) 305/2011 (Building Products).**

1.3 Technical dimensions and features

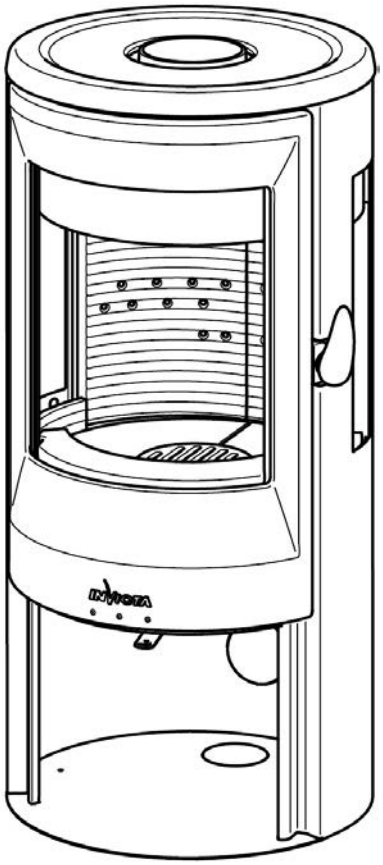
1.3.1 Technical drawings stove body

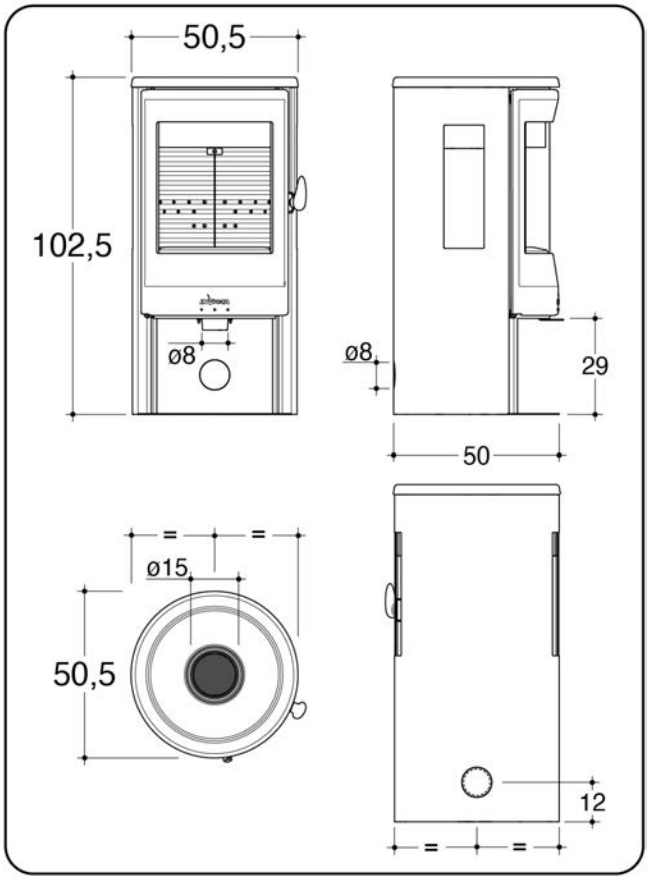
NEOSEN PLUS



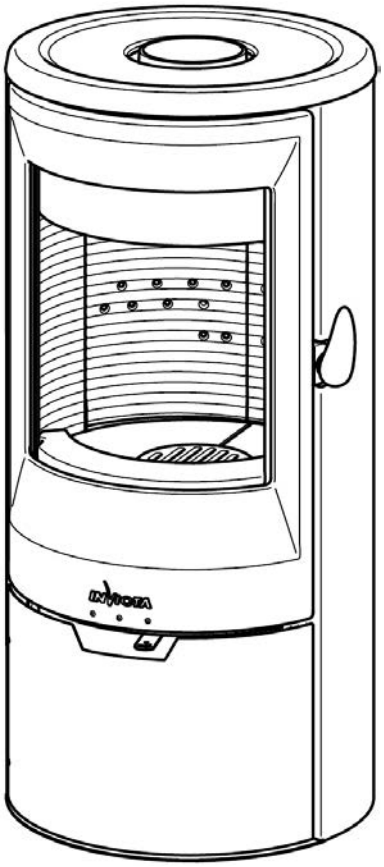


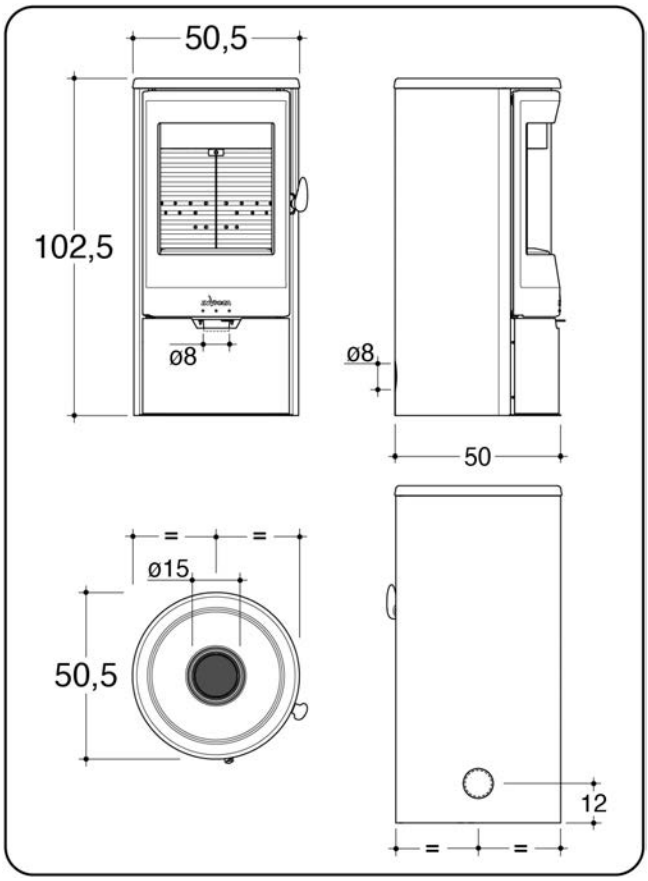
NEOSEN 3V PLUS





NEOSEN ETANCHE PLUS





1.3.2 Technical features

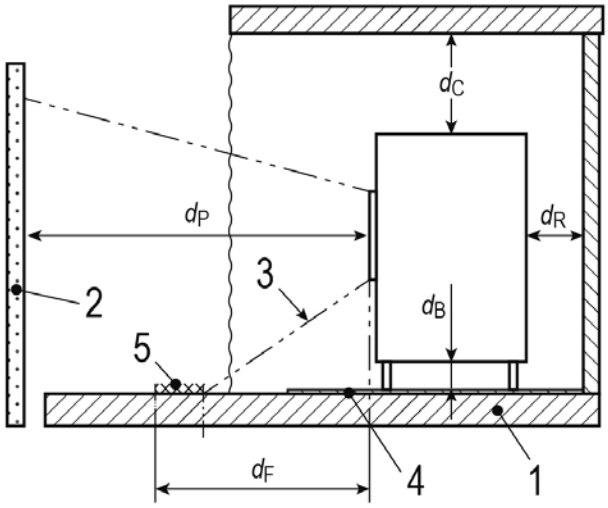
Readings in accordance with standard EN 16510-2-1:2022		NEOSEN PLUS NEOSEN 3V PLUS NEOSEN ETANCHE PLUS	
Output	simb.	nominal (nom)	
Thermal Output	P	8,0	kW
Space heat output	P_{SH}	8,0	kW
Water heat output	P_W	-	kW
efficiency	η	81	%
seasonal space heating efficiency at nominal heat output	η_S	71	%
energy efficiency index	EEI	107	W
CO emissions (at 13% of O_2)	CO	0,1200	%
CO emissions (at 13% of O_2)	CO	1500	mg/Nm^3
NOx emissions (at 13% of O_2)	NO_x	200	mg/Nm^3
hydrocarbon emissions (at 13% of O_2)	OGC	80	mg/Nm^3
particulate matter emissions (at 13% of O_2)	PM	40	mg/Nm^3
flue draught pressure	p	10	Pa
maximum operating pressure	p_W	-	kPa
thickness of protective insulating material	s	0	mm
consumption of electrical auxiliary energy	el	-	kW
consumption of electrical auxiliary energy at standby	el_{SB}	-	kW
nominal voltage	E	-	V
nominal frequency	f	-	Hz
maximum electrical input	W_{max}	-	W
chimney flue class	T_{class}	T400G	
maximum chimney load sustainable by the appliance	m_{chim}	0	kg
flue gas temperature	$T_{f,g}$	231	°C
flue gas temperature downstream of the flue spigot/socket	T_s	277	°C
total capacity of flue gases	$\Phi_{f,g}$	7,4	g/s
fuel	-	wood logs	
fuel consumption per hour	m_h	2,25	kg/h
receptacle capacity	-	-	kg
burn time	-	-	h
flue gases outlet	d_{out}	Ø 150	mm
interior section of chimney flue	-	150 x 150	mm
minimum height of chimney flue (from connecting joint)	-	6	m
combustion air intake	-	Ø 80	mm
protection degree IP	-	IP20	
heatable area at certified power (*)	-	92	m^2
net weight	m	124 Neosen Plus 115 Neosen 3V Plus 127 Neosen Etanche Plus	kg

operation mode continous (CON) or intermittent (INT)	**CON/INT**	**INT**	
type of appliance	**-**	**Type BE**	

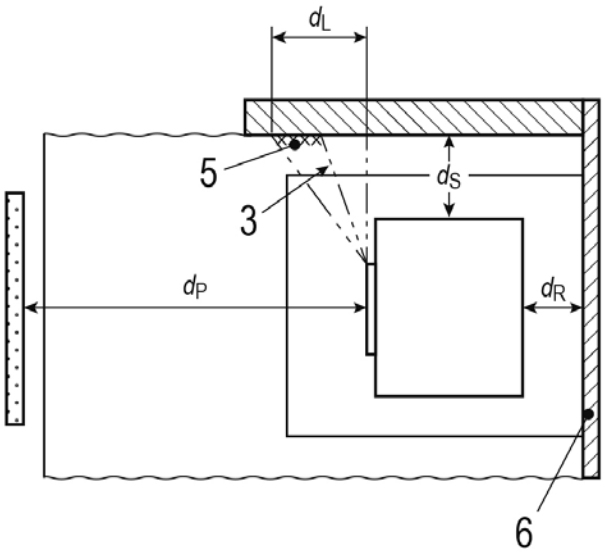
* The value indicated for heatable area (referred to areas with 2.70 m height with heating requirement between 32 and 33 W/m^3) is merely indicative and it is calculated on the basis of perfectly insulated rooms and with the appliance installed in the best position to ensure an even distribution of the thermal flow. Given the countless different installation situations that can be found, the MANUFACTURER does not guarantee the matching of the indicated values in all contexts.

1.3.3 Safety clearances from combustible materials

If walls have wood paneling or other combustible materials, keep a minimum safe clearance as shown in the following diagram and table.
It is recommended that particularly delicate objects or pieces of furniture be installed at higher distances than those previously recommended, if you assume they could be damaged by the changes in temperature produced during the appliance operation.
With non-combustible walls, place the appliance at a minimum safe clearance (dnon) as shown in the table below.



Side view



Top view

	KEY
1	floor
2	combustible material in the front
3	radiation zone
4	floor protection
5	surface subject to radiation to be protected
6	combustible surfaces

	safety clearances from combustible materials	mm
d_R	back clearance	600
d_S	side clearance	800
d_B	down clearance	0
d_C	up clearance	750
d_P	front radiation	1500
d_F	floor radiation	1500
d_L	side radiation	1500
d_{non}	*minimum clearance from NON combustible materials*	100

In case of floors made of inflammable material, it is necessary to place an appropriate protection underneath the appliance (for example a 20/10 steel floor protection mat).

1.4 Firewood

The following paragraphs provide technical and practical information regarding the fuel used, so that the user will understand the importance that the MANUFACTURER gives to the selection and preparation of the fuel, and the correct use of the appliance, which will have a significant impact on proper functioning as well as minimizing fuel consumption and pollution.

Wood is the only source of energy that is:

- Renewable, coming from trees and plants, which grow under the action of sun light.
- Organic, being produced by living organisms.
- Neutral as regards carbon dioxide released into the atmosphere ("neutral CO_2"), since the CO_2 produced after the combustion is that absorbed during photosynthesis.
- Clean since burning wood efficiently and completely produces only natural substances that are abundantly present everywhere in our environment in non-toxic concentrations for the living organisms.

1.4.1 Characteristics of firewood

Firewood is usually classified into softwood (poor or fair quality) and hardwood (good quality) depending upon its specific weight; hardwood, which weighs more than softwood, allows to reduce the amount of wood needed.

Softwood weighs about 300-350 kg/cu.m (with 15/20% moisture content):
it is easy to ignite, it burns rapidly and provides a lively fire.
Softwood includes the following species: fir, ailanthus, locust, chestnut, cypress, cornelian cherry, mulberry, larch, alder, pine, poplar, willow, elder and lime.

Softwood produces more creosote with consequential need for more frequent cleaning of your chimney flue.

Hardwood weighs about 350-400 kg/cu.m (with 15/20% moisture content):
it has a higher density and is less resinous than softwood, it burns slowly and keeps a low flame (suitable for home heating).
Hardwood includes the following species: maple, white birch, hornbeam, bitter oak, cherry, beech, ash, holm-oak, walnut, olive, elm, pear, plane, oak and false acacia (those highlighted are among the best wood types).
As seen above, firewood for heating has different features according to the tree species it comes from. There are different types of wood and their properties in terms of heat value vary from species to species. The heating value of wood fuel (kcal/kg) is the quantity of heat produced after the complete combustion of 1 kg of wood.
The heating value of the different wood types is not only affected by the density, but also by their moisture content; as a consequence the output and the efficiency of the appliance is strictly dependent upon the type of wood burned (normally the heating value of a well seasoned wood is 3200 kcal/kg).
Here find some comparative data:

- SOFTWOOD = kcal/kg 2800 - 3400.
- HARDWOOD = kcal/kg 3400 - 3900.
- WOOD BRIQUETTES = kcal/kg 3850 - 4200.
- WOOD PELLET = kcal/kg 4200 - 4600.

The only fuel admitted for the appliance use is firewood and its by-products.

The use of any other type of solid fuel (e.g. coal) is FORBIDDEN.

Firewood is:

- Corticated timber at a natural state, in pieces or not (logs, or briquettes free of any binders or additives, kindling, shavings from processing trees), deadwood like branches and pine cones.
- Wood residues created by the furniture manufacturing or the construction industry, provided they are not painted or treated.

Firewood is not:

- Any wood scrap coming from house demolition, restoration or renovation, or coming from packing material (pallets), wooden furniture, Formica, even if mixed with natural wood.
- Any other wood material such as painted, varnished and treated wood scraps even if mixed with natural firewood.

If possible, avoid the use of resinous wood as it can produce obstructions, which damage the inner parts of the appliance firebox and the chimney flue.

1.4.2 Preparing firewood

The firewood manufacturing processes vary greatly depending upon the final type of fuel to produce: wood pieces, briquettes or pellets.
Wood pellets or briquettes are produced only in big sawmills that have large quantities of shavings and sawdust at disposal, which become valuable products for an appealing market.
Individuals who are landowners can easily obtain the amount of wood that will be needed for their home heating.
Those who are not landowners can address dealers experienced in firewood combustion, who can advise about quality and wood species locally available.
The most important steps in producing firewood are the following:

- Cutting of trees or suckers (usually on waning moon or in winter).
- Trimming of the smaller branches from the trunk (usually when they are less than 4 cm in diameter).
- Cutting of trunks and branches into 1 m long logs.
- Cutting of the bigger logs in half along their length (quartering).
- Piling of the sawn logs in a dry, ventilated location favouring preliminary wood drying.
- Covering the upper part of wood piles with clothes as shelf from the rain.
- Cutting of the wood logs into small pieces whose length will vary to suit the user's needs. Final wood stacking in a dry, ventilated location away from rain and humidity.
- Air-drying for at least:
  - 2 years (outdoor).
  - 1 year (indoor, in an adequate place).

"Deadwood" does not necessarily mean "dry wood": the dryness of wood is greatly determined by the time it takes to dry but also by the place where wood is stored for seasoning. Should the wood be stacked for a long amount of time without providing any protection or be kept in a humid, unsufficiently aerated place, it will rot and decay easily under the action of mildew with consequential lost of its heating value.

1.4.3 Purchasing firewood

The units of measurement commonly used in selling firewood are mainly three:

- Cubic metre (cu.m): unit of measurement referring to any type of wood and corresponding to 1cu m of solid wood (the weight of 1cu m of wood varies greatly depending upon species and humidity).
- Stere (metre) (sm): unit of measurement referring to the stacked wood pieces and corresponding to 1 cu.m including the air space between the pieces of stacked wood. The amount of wood contained in a space of 1 stere depends upon species, relative moisture content, diametre and shape of the wood pieces, and the way in which they have been stacked (one stere of wood logs 1 m long corresponds to approximately 0,7 cu.m of wood).
- Quintal (q): officially suppressed, this unit of measurement (100 kg; 0,1 t) is still the most widely used in selling firewood.

Knowing the type of firewood and its moisture content, if it is sold on a space basis, allows you to get an idea of its heating value, whereas it is not necessary to know the species of wood if it is sold on a weight basis as with an equal moisture content the heat value differs slightly.

The heating value of wood varies greatly depending upon its moisture content, thus when you buy wood as a source of energy it would be better knowing its moisture content.
If we compare as a way of example a piece of beech having a moisture content of 30% with a well seasoned piece of the same wood type having a moisture content of 15%, the latter will release 25% more heat. When the moisture content is 50% the heat value is reduced by the half.

Purchase of green, damp or wet wood, could mean that you are also buying the water inside. To be sure the firewood you have purchased has been seasoned for about one year, you should always buy your firewood in the summertime (June-July) since trees are mostly cut in autumn.

Be careful with any painted or treated wood whose combustion can give off harmful fumes, and whose use is only allowed in authorized combustion plants.

1.4.4 Combustion

When wood burns there are three stages of combustion:

- DRYING: Moisture in wood is removed by evaporation by means of the surrounding fire. Any type of wood contains a percentage of moisture. Since part of the heat produced by the fire is used for evaporation, it is more convenient and less polluting to burn well-seasoned wood (max. 20% moisture) rather than green wood freshly cut (with 50% moisture or more). This stage is over when the wood temperature reaches 100°C (water boiling point).
- PYROLYSIS: At a higher temperature wood breaks down chemically and volatile gases and char are formed. When temperature is between 260°C and 315°C this char and a small amount of these gases break into flames and wood burns. Most of these gases will then be expelled through the chimney unless the temperature of the appliance is high enough to burn them. As soon as these gases pass through the chimney they will mix with moisture to form creosote.
- GASIFICATION AND COMBUSTION: Gases (smoke) and charcoal (wood residues) burn. Charcoal start burning and releases heat between 540°C and 705°C, then become ash. Most of the usable heat is produced during this stage. Volatile gases, when mixed with the proper amount of oxygen, ignite when temperature is between 600°C and 650°C. But gases rarely reach the above temperature, unless they are conveyed towards flames or towards an area inside the firebox where this temperature has been reached.

In practice the three stages are interwoven in a complex way during the combustion of every single piece of wood.
The incomplete combustion of wood results in toxic emissions. Note that the worst is the emission level the lower the heat produced by the combustion process (e.g.: the use of big wood pieces results in slow combustion and low temperatures within the fireplace, which affects negatively both the appliance and the chimney; the use of green, damp wood, which cannot burn completely, results in soot and creosote formation collecting rapidly on the chimney walls).
On the contrary, in case of complete combustion (with well-seasoned wood and pieces of appropriate size) we reach a higher temperature thus reducing the overall amount of the wood needed.
To ensure complete combustion and high efficiency the following conditions must be met:

- The wood used must be dry and well-seasoned (with about 15/20% moisture content).
- Your wood-burning appliance must be designed in such a way as to ensure that:
  - High temperatures are reached into the firebox.
  - Gases emitted in the combustion process are kept at very high temperatures for long time.
  - There is a sufficient amount of oxygen the gases emitted in the combustion process.

1.5 Recommendations

1.5.1 Safety precautions

IMPORTANT!!! For the proper and safe operation of this appliance and in order to prevent any possibility of causing serious injury, the instructions given in this manual must always be followed.

CAUTION: The installation, operation control, repair and maintenance works, must be executed by qualified staff only.

CAUTION: If there has been a fire in the flue it is necessary to turn the appliance off and call the fire department and check whether the chimney stack and flue pipe have been visibly damaged. Make any repairs before any further use of the combustion system.

ATTENTION: this appliance CAN NOT be installed using a shared chimney flue.

CAUTION: All national and local regulations and European Standards shall be complied with when installing the appliance.

CAUTION: All national and local regulations and European Standards shall be complied with when operating the appliance.

CAUTION: The accident-prevention and safety requirements stated in this manual must be followed carefully.

CAUTION: This manual must be read and understood in every part, and the use of the controls must be clear before operating the appliance or executing any works on it.

WARNING: Any tampering or unauthorized replacement of parts of the appliance could cause dangerous situations for the operator's safety, relieving the MANUFACTURER from any civil and criminal liability.

WARNING: During operation, some of the appliance surface areas may become very hot; we highly recommend not to leave the unit unattended in the presence of children, elderly and disabled people.

Do not touch the glass; the glass provides visibility of the flames and also contributes to the distribution of heat through irradiation, so it reaches very high temperatures.

WARNING: Do not store combustible materials under the appliance.

CAUTION: Leaning or hanging on the opened door imprudently, during cleaning operations, could cause the turnover of the appliance; it is therefore advisable not to do so and to take the necessary precautions especially when children, elderly or disabled people are present.

WARNING: Never use flammable liquids (alcohol or petrol) to speed up the lighting of a wood fire: it is extremely dangerous. Alcohol and petrol release highly flammable vapours, which could provoke the risk of burns.

1.5.2 General recommendations

CAUTION: This appliance is intended for the use it has been designed and manufactured for only.

CAUTION: This appliance in not intended to be used as a cooker so as to avoid that vapours and grease cause incrustations on the combustion chamber's components and in the exhaust venting system.

ATTENTION: Don't use the appliance as an incinerator.

WARNING: Do not use the appliance in case of breakdown or malfunction.

In order to avoid releasing smoke in the room, it is FORBIDDEN to operate the appliance with the door open, without the glass panel or with broken glass.

Open the door slowly: Before opening the door completely, leave it partially opened for a few seconds. Should some smoke blow back, there is no danger, just aerate the room temporarily.

Ceramic glass thermal shock resistance 750°C. It is important not to light the fire close to the glass to avoid its damage (white residue) in the long run.

Inspect and clean the exhaust venting system periodically.

Do NOT spray the appliance with water to clean any of its parts.

For repairing, refer to authorized professionals and ask for original replacement parts only.

Keep this instruction manual as an integral part of the product for future reference.
It must be supplied together with the unit if this is resold or moved to another place, so as to allow the next user and installer to get acquainted with its operating instructions and requirements.
Should the manual be lost or become unreadable, call Caminetti Montegrappa for a new copy.

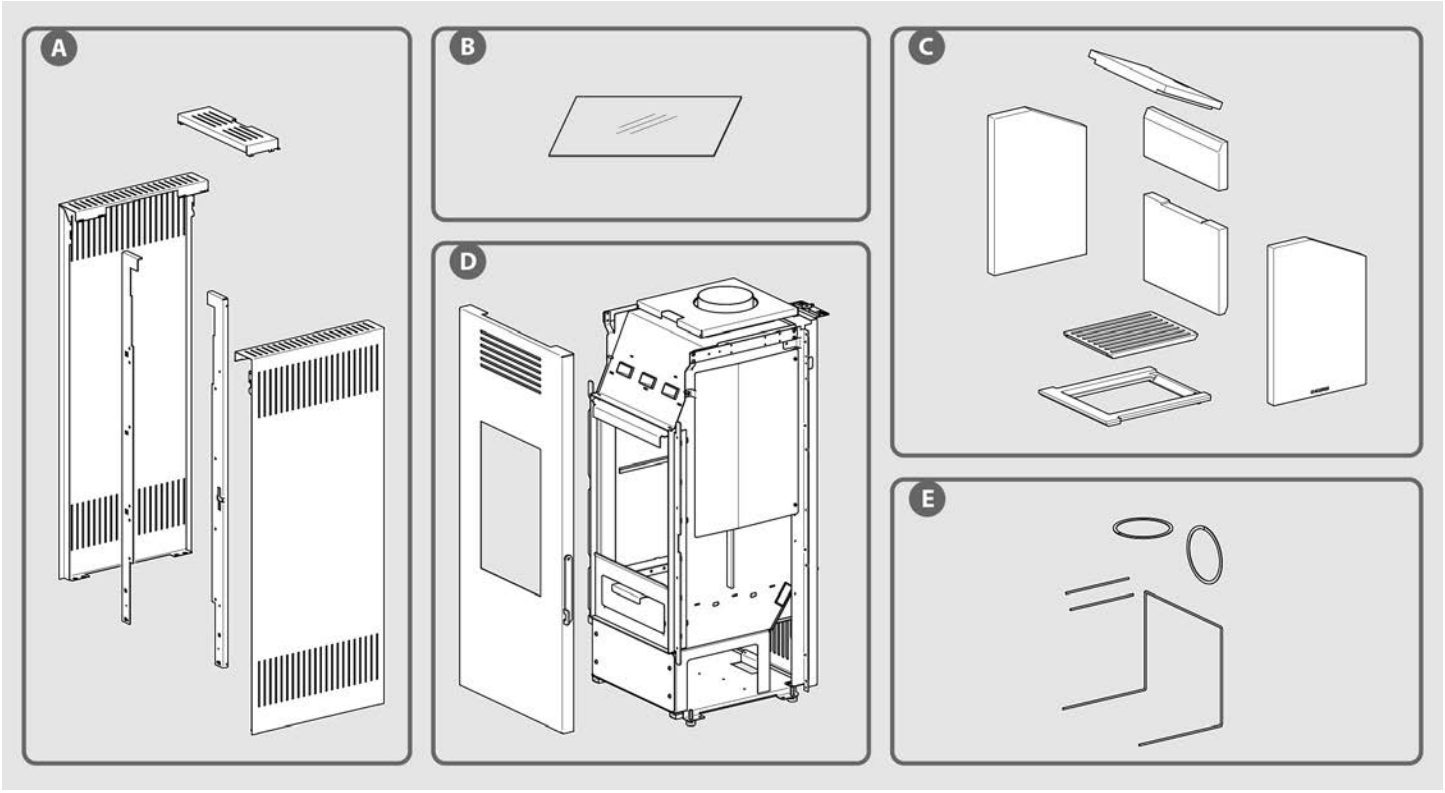
Note: If the appliance is not used according to the present instructions, the MANUFACTURER does not assume any responsibility for any injury or damage to people, properties or pets that could occur. Moreover the MANUFACTURER does not assume any responsibility for any injury or damage to people, properties or pets resulting from the non-observance of the following recommendations:
A) During any maintenance, adjusting, cleaning and servicing works, the appliance must not be left unattended in order to avoid incidental starting by third party.
B) Provide an efficient connection to the exhaust venting system.
C) Verificare che l'ambiente di installazione sia adeguatamente aerato come prescritto.

1.5.3 End-of-life disposal of appliance components

The abandonment of the appliance in accessible areas is a serious danger to humans and animals. The responsibility for any damage to people and animals always lies with the owner.

Upon demolition, CE marking, this manual, the declaration of disposal, the manual for installation and other documents relating to this appliance must be preserved. Remember that any registration with the regional land registry should be annulled.

WARNING: Improper disposal of the appliance by the user implies the application of administrative sanctions provided by law.



The exploded view and the following table show and list the components of the appliance and the instructions for correct separation and disposal.

A. EXTERNAL LINING
If present, dispose of separately according to material:
- metal
- glass
- tiles or ceramic material
- stone

B. DOOR GLASS
If present, dispose of separately in glass recycle containers.

C. INTERNAL LINING
If present, dispose of separately according to material:
- metal
- tiles or ceramic material

D. METAL STRUCTURE
Dispose of separately in metal recycle containers.

E. NON-RECYCLABLE COMPONENTS
Handles, Gaskets and piping made of rubber, silicone or fibres, etc.
Dispose of in mixed waste.

1.6 Environment requirements

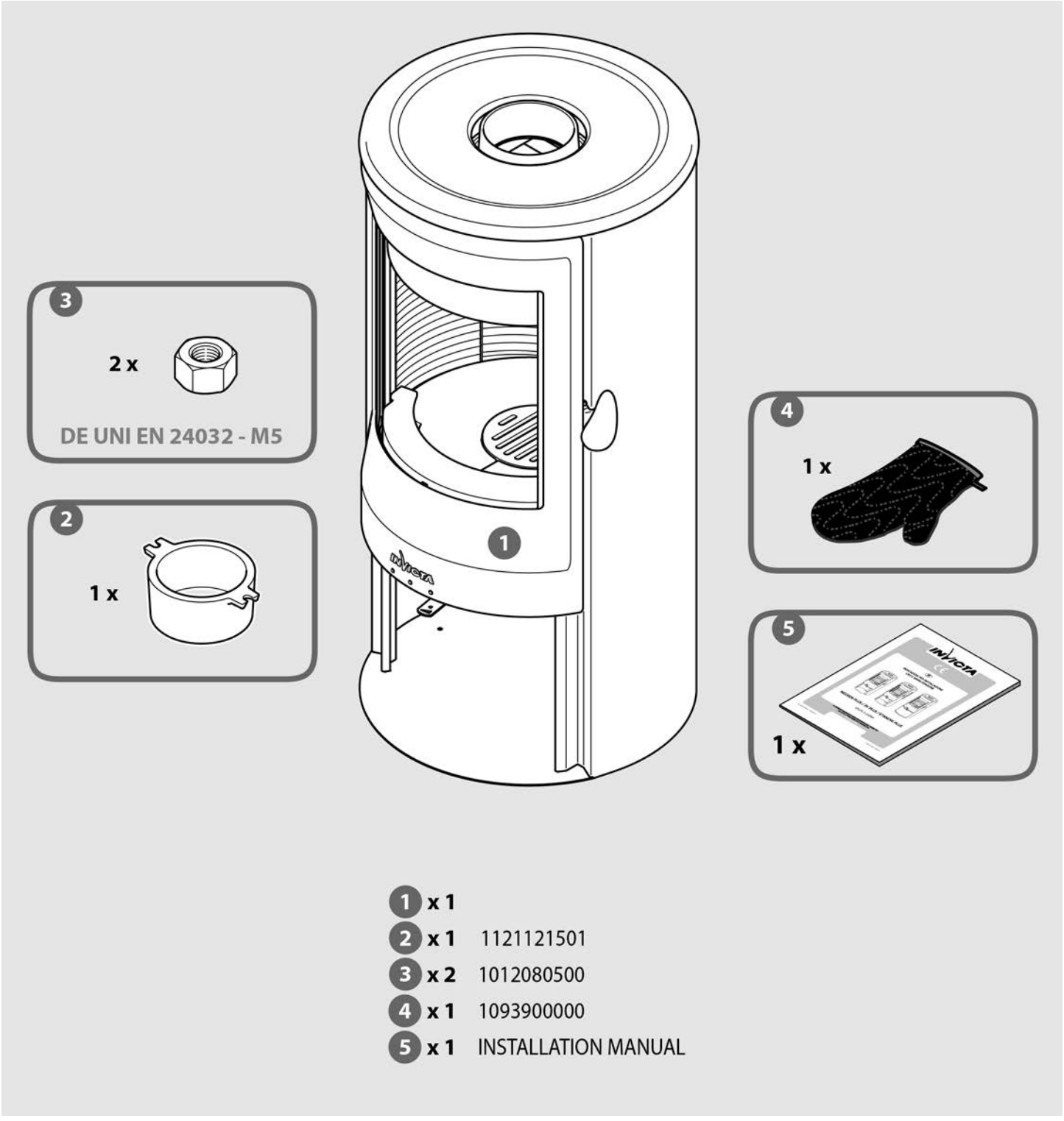
IMPORTANT: To ensure its proper operation, the appliance shall be located in a ventilated room where an air flow allowing the complete combustion of wood can be admitted according to the installation requirements under the local standards currently in force.
The air supply must be sufficient for both proper combustion and to provide ventilation of the room, that is, no less than 20 sq.m.
The natural admission of air must be provided through a permanent opening made on the exterior wall(s) of the room to be aired (for the minimum section dimensions see section 2.3.2); the outside fresh air intakes must be made in such a way they can never be obstructed (check regularly).
Air entering the room where the appliance is installed from contiguous room(s) is permitted provided it is admitted from a space which is aired directly from outside, a space which is not used as a bedroom or a bathroom and where fire ignition could never occur, as in a garage or in a combustible warehouse, in compliance with the requirements under the local standards currently in force.
40 cu.m/h of air is required in order to ensure proper fuel combustion.
(This pertains to operation with door closed).

Do NOT install the appliance in a bedroom or a bathroom, or in any other room where an existing heating appliance (fireplace, stove, etc.) is not provided with its own outside air source.

It is FORBIDDEN to install the appliance near objects made of combustible materials (curtains, pieces of furniture, carpets,...).
If the appliance is installed on flooring that may be flammable, a 2 mm thick (minimum) non-flammable floor protector must be laid underneath that is larger than the unit's base.

The appliance is not designed to be operated in environments where materials may explode. Therefore, it is FORBIDDEN the use of the appliance in an explosive atmosphere or in a space where materials or machineries may produce gas or dust emissions in such a quantity they may cause an explosion.

1.7 Equipment



1 x 1
2 x 1 1121121501
3 x 2 1012080500
4 x 1 1093900000
5 x 1 INSTALLATION MANUAL

2 INSTALLATION

2.1 Packaging dismantling and disposal

Consisting of non-toxic and not noxious materials, the packaging does not need any special disposal procedure; the user is in charge of stocking, disposing of, or recycling the wastes of the packaging according to the regulations in force in the country where the product has been purchased.

WARNING: Keep plastic coverings out of the children's reach as they could represent a danger.

2.2 Installation requirements

The appliance must be installed in a space which allows to operate it and perform routine maintenance works easily. The room chosen for the installation of the appliance must therefore feature:

- Proper environment conditions and permanent outside air source as indicated under section 1.6 "Environment requirements".
- Made with any structural floors of adequate load-bearing capacity (check weight of appliance in data sheet in Section 1.3.2). If the existing construction does not meet this requirement, appropriate measures (such as a load distribution plate) must be taken.
- A system of exhaust gases complying with the standards in force aiming at guaranteeing:
  - Adequate draught for the correct and safe appliance operation.
  - Adequate resistance to high temperatures.
  - Adequate resistance to corrosion due to combustion products.
  - Easy access for periodic checks and maintenance.
  - Adequate insulation from inflammable materials.
- The room must also comply also with further standards in force in the country where the appliance is installed.

CAUTION: The installation of the appliance must provide easy access for cleaning the appliance itself, the flue pipes and the chimney.

2.3 Appliance installation

IMPORTANT: All installation work for your appliance must be performed only by qualified technicians or comparably experienced and knowledgeable persons.

2.3.1 Appliance Positioning

Choose a location in the room with a good distribution of warm air, either by radiation or convection.

Do not place the appliance on a floor of combustible material.

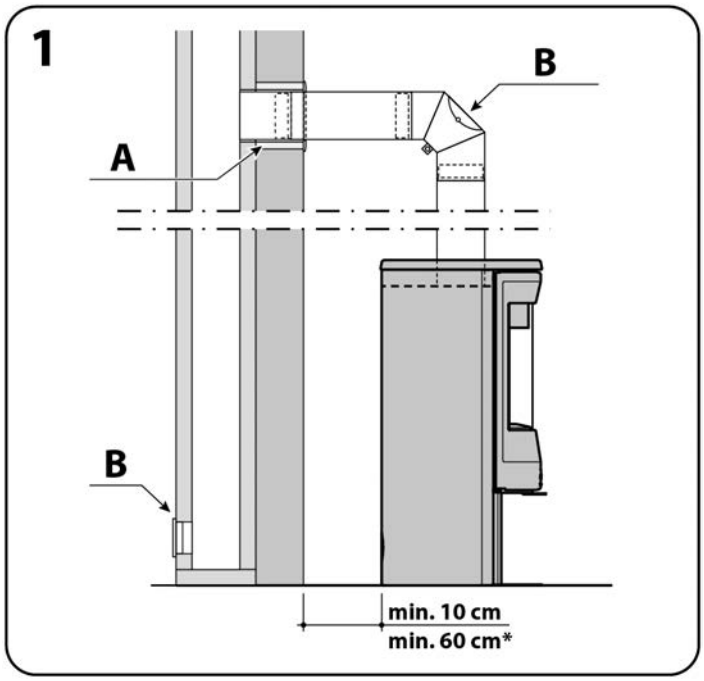
It is very important that the appliance is perfectly levelled, both horizontally and vertically (use a spirit level).

After choosing the most suitable location for your appliance, but before setting it in place, it is necessary to determine the height of the center point of the flue gas outlet pipe (see section 2.3.3) and make an access hole through the wall.
See section 2.3.2 for making the outside air intake hole.

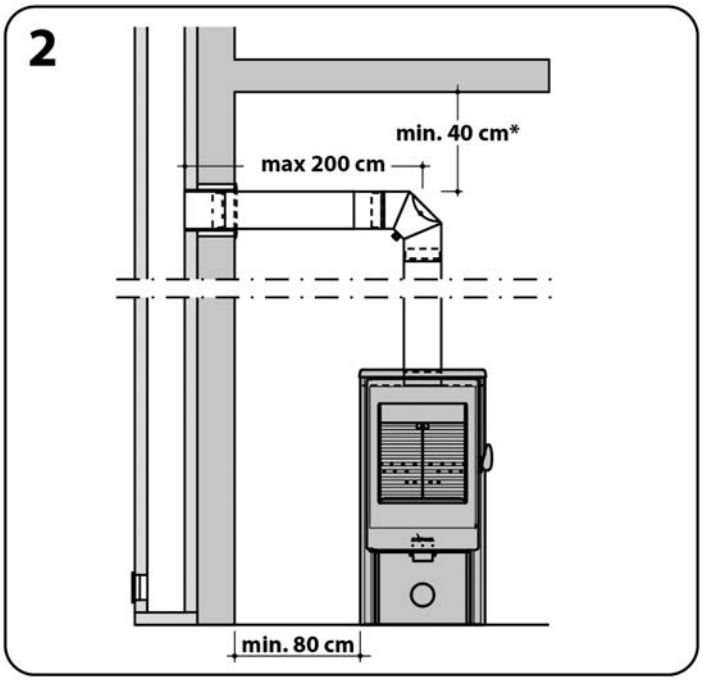
IMPORTANT: When cutting a hole for the appliance exhaust pipe through a inflammable wall, provide the necessary insulation whose thickness may vary from a minimum of 3 cm up to a maximum of 10 cm.
We otherwise recommend the use of lined pipes, which are also excellent for preventing condensation in exterior venting systems.

The installation of your appliance must comply with all prescriptions and recommendations indicated under sections 1.5, 1.6 and 2.2.

IMPORTANT: All sections of the exhaust venting system must be removable to allow periodical maintenance (see figures 1 and 2).



Side view
* (with flammable walls)
A. Insulation - B. Clean-out door

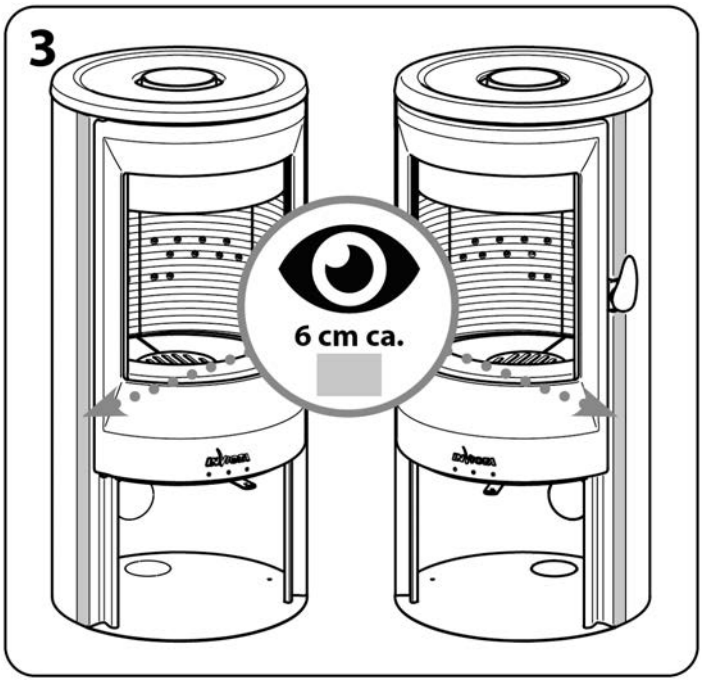


Frontal view
* (with flammable ceilings)

After positioning the appliance:

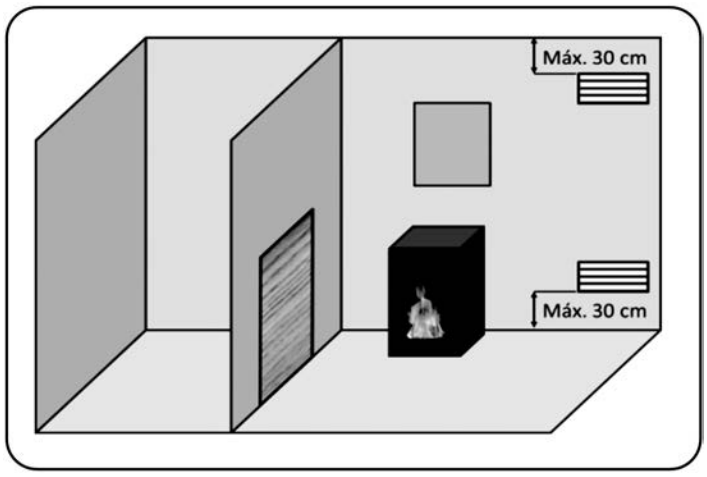
- Check that the glass has not been broken or damaged.
- Check that the flue gas passages are not obstructed by pieces of packing or loose parts.
- Check that the seals of the flue gas exhauster are intact.
- Check that the removable parts are installed in place.
- Verify that the door can be closed tightly.

This part of the appliance is a straight area and does not follow the curvature due to the design of the appliance.



2.3.2 Ventilation of the environment

The appliance requires a supply of outside air for proper operation. An adequate supply of outside air should be ensured to the room in which it is installed. This amount of oxygen will be additional to the oxygen needed for human consumption (air renewal).
To ensure good quality of the air we breathe and to avoid possible accidents due to high concentrations of gases produced by combustion (mainly carbon dioxide and monoxide), it is mandatory to provide air renewal of the room where the appliance is located.
The appliance must always have at least two permanent grilles or openings to the outside for air exchange (one inlet and one outlet).
One of these two grilles should be placed at the top of the room (less than 30 cm from the ceiling) and the other at the bottom (less than 30 cm from the floor level). In addition, the two grilles must be connected with the outside so that the air in the room can be renewed with fresh air.



Indicative diagram for ventilation grilles.

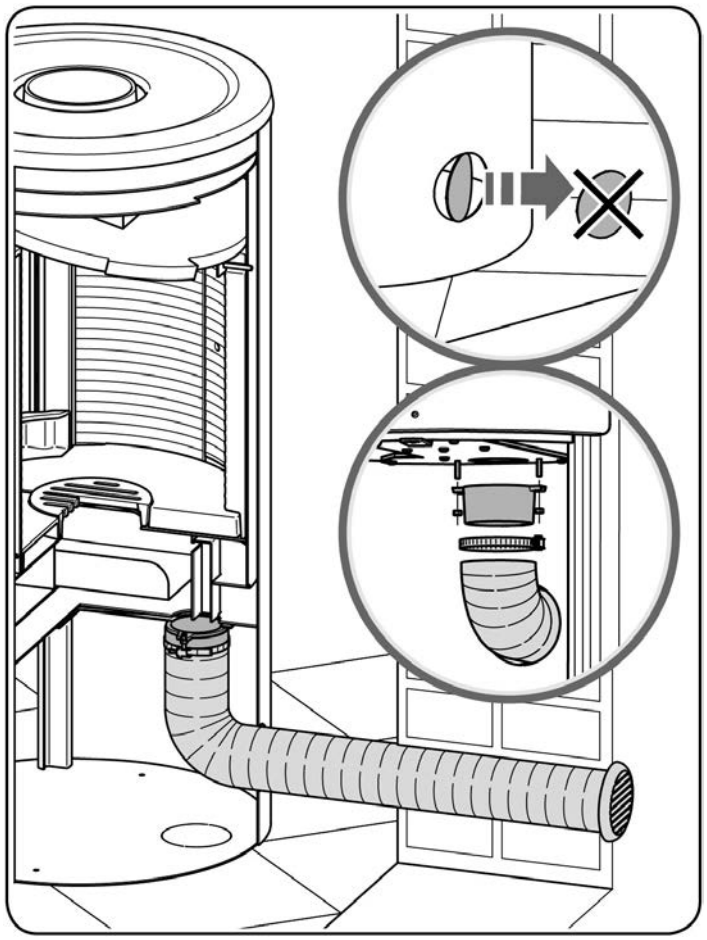
The minimum cross section that each of the grilles must have depends on the rated power of the appliance, in this case 70 cm^2.

The door of the appliance must always be closed during operation.

In rooms equipped with CMV (controlled mechanical ventilation), this sucks in and renews the room air. In this case, since the room is slightly de-pressurized, it is necessary to install an external air intake, which cannot be closed, with a cross section of at least 90 cm^2.

The combustion air intake can also be connected directly from the outside directly, by means of a pipe measuring 80 mm in diameter and maximum 3 meters in length, with protection grid installed externally.

1. Break the pre-cut plug half-tree on the back of the appliance.
2. Insert the cast iron fitting (code 1121121501) onto the threaded studs located under the appliance at the combustion air inlet.
3. Secure the cast iron fitting with the two nuts (part no. 1012080500) provided.
4. Connect a Ø80 mm aluminium hose to the cast iron fitting, securing it with a clamp.
5. Pass the hose through the hole on the backrest of the appliance and through the wall. Complete the external installation by mounting a protective grid.



2.3.3 Connection to the chimney flue

For the connection of the unit to the chimney flue, use only non-combustible elements suitable to resist to the combustion products and to the condensate (creosote) build-up.

The use of fibrocement and aluminium flexible pipes for connecting the appliance to the chimney flue is FORBIDDEN.

The appliance works with negative pressure; to prevent creosote from building up and be conveyed to the appliance it is important that the connection to the chimney flue be sealed and airtight.
The connection to the chimney flue should ensure easy removal of soot and routine cleaning by means of a metal brush.

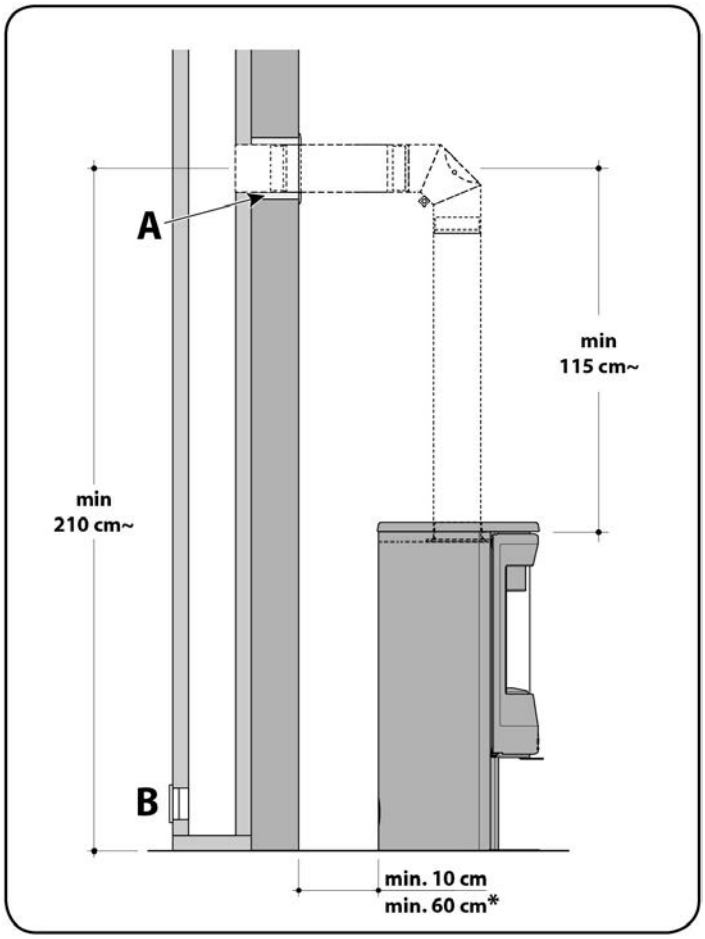
It is FORBIDDEN to install any manually-operated draught controls along the connection to the chimney flue.

After having placed the appliance in the exact position as indicated under section 2.4.2, use rigid steel pipes with the same section as the "flue exit pipe" (see technical sheet, section 1.3.2) to carry out the connection to the chimney flue, and perfectly seal the connection. (Use CE certified products according to the standard EN 1856-2:2003).

It is FORBIDDEN to carry out any diameter reductions of the connecting pipe to the chimney flue.

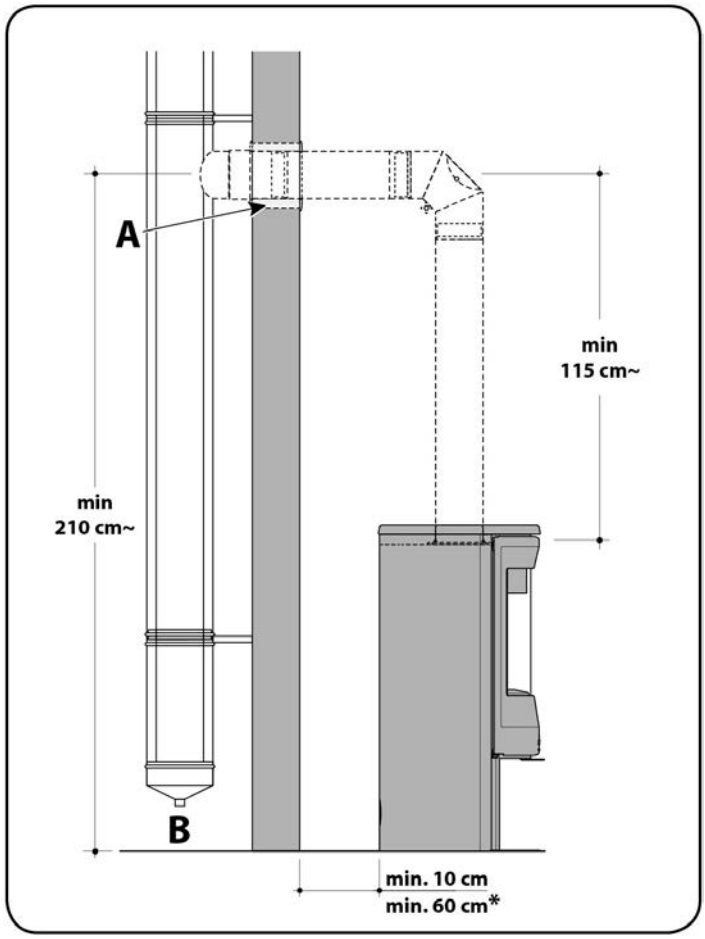
WARNING: For the connection to the chimney flue, implement no more than two bends with angles in excess of or equal to 90°; the horizontal length of the connector flue must not exceed 200 cm.

vent into a traditional type chimney flue



* (with flammable walls)
A. Insulation
B. Clean-out door

exterior vertical conduit (stainless steel insulated type)



* (with flammable walls)
A. Insulation
B. Clean-out door

2.3.4 Chimney flue

The passageway for conveying flue gases from the appliance to the "chimney flue" (technically, chimney) is called "flue conduit". The flue conduit must be built in compliance with the standard EN 1856 parts 1-2.
The chimney flue or the vertical exhaust vent for the flue gases from a natural draught appliance must therefore meet the following requirements:

- Be flue gas- and water-tight, and properly insulated from combustible or flammable materials according to the usage conditions (EN 1443 and EN 13384 parts 1-2-3).
- Be made of materials resistant to usual mechanical shocks, heat, flue gases and possible condensate.
- Have all connections to the different elements of which the flue conduit is made of properly sealed and airtight.
- Be as much as possible vertical; any angle from its axis must not exceed 45°.
- Be installed at an adequate distance away from any combustible or flammable materials by means of an air flow or of an insulating material.
- Have an inner section preferably circular; we therefore recommend piping installed within square or rectangular chimneys (which otherwise must have a 1-to-1.5 internal sizes max. ratio and a radius of curvature of the interior angles of at least 20 mm).
- The interior section must be invariable, free from constrictions and independent.
- It must not burden the appliance.

A cleanout opening with a tight fitting lid under the connection betweeen the exhaust pipe and the appliance should be provided for allowing access to the chimney flue for purposes of inspecting and removing solid materials and possible condensate.

The draught value indicated among the technical features of the appliance refers to Technical Norms and testing, so as to guarantee the best thermal performances of the appliance (consumption, efficiency, emissions) in conformity with the technical data declared and certified by the Institute in charge of the certification. A higher draught value could provoke malfunctioning, high fuel consumption, overheating of the appliance body and cause annoying noises in the firebox.

A chimney flue with an oversize section slows down the gas speed, makes unburnt by-products collect on its walls and reduces the gas temperature, which produces a concentration of creosote in the chimney flue resulting in wood start-up and combustion problems.
On the other hand, a chimney flue with an undersize section which does not allow the smoke to be easily carried out of the appliance, may choke the combustion (and so put out the fire).

The MANUFACTURER assumes no responsibility over the appliance malfunction resulting from a bad designed chimney flue and/or a chimney flue which has not been installed in compliance with the given requirements.

If the above directions are not followed, by opening the door of the combustion chamber, smoke may escape into the room where the appliance is installed. This is because the installed chimney is unable to generate sufficient vacuum (draft).
The installer must then correct these defects in the installation, taking into account the following parameters: material, insulation, diameter, seal, cleanliness, height, verticality/straightness, finish, etc.

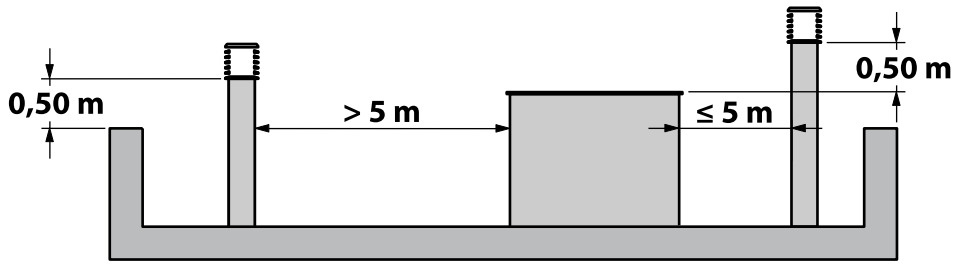
CAUTION: If there has been a fire in the flue it is necessary to turn the appliance off and call the fire department and check whether the chimney stack and flue pipe have been visibly damaged. Make any repairs before any further use of the combustion system.

2.3.5 Chimney cap

The good draught of the chimney flue also depends on the type of terminal covering the top of the chimney, which must comply with the following requirements:

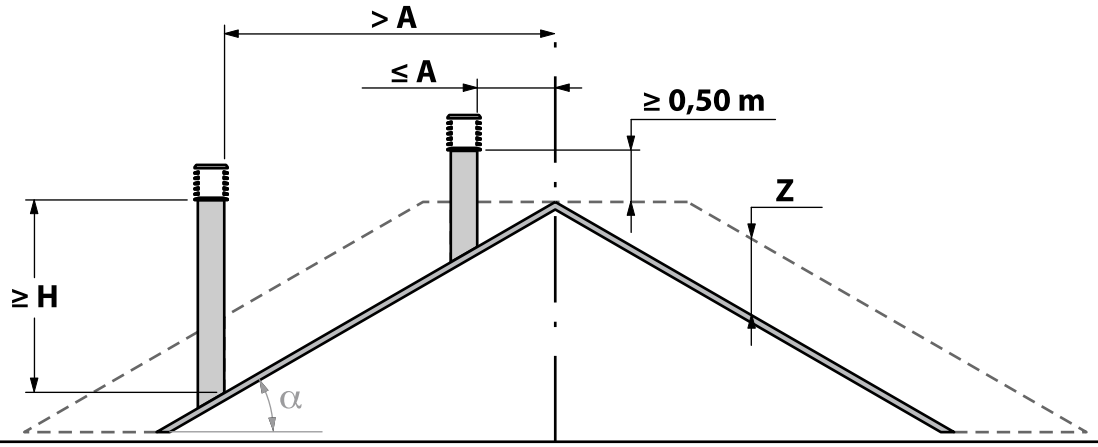
- Have the same inner section as that of the chimney flue.
- Its usable section at the outlet must not be less than the double of the inner section of the chimney flue.
- Be built or designed in such a way as to prevent the entry of rain, snow, foreign bodies, and to ensure the correct release of the combustion products even in case of air flows around the house (the use of wind-stop terminals is recommended).
- Be located so as to ensure the correct release and diluition of the products of combustion at a distance away from any area subject to downdraft, whose size depends on the angle of the roof; therefore it is necessary to comply with the required minimum heights in the figure below.
- In case there are two or more adjacent chimneys, the one which exhausts from a solid fuel appliance or which serves an upper floor must terminate at least 50 cm above the other/s to avoid draught problems.
- The distance from the chimney cap and any higher buildings, plants, trees, etc. must not be less than 8/10 m. In case the distance is less than the required, the cap must terminate at least 1 m above them.

1



FLAT ROOF

2



SLOPING ROOF

Angle of roof α expressed in degrees (°)	Clearance from axle of roof top to chimney A expressed in metres (m)	Min. height of outlet measured from the roof H expressed in metres (m)	Height of downdraft area Z expressed in metres (m)
15	1,85	1,00	0,50
30	1,50	1,30	0,80
45	1,30	2,00	1,50
60	1,20	2,60	2,10

3 OPERATION

3.1 Pre- and first-lighting instructions

Before lighting the appliance for the first time the following must be done:

- Remove the styrofoam block that is at the top and is removed through the flue gas outlet.
- Remove the cardboard covering the cast iron parts and the cardboard holding the baffle.
- Remove the sticker from the glass and any adhesive marks if necessary.
- Ensure that all safety requirements are met (see sections 1.5 and 1.6).

For the first lighting refer to the technical instructions given in section 3.2 taking particular care to keep the fire moderate for about one hour.
After this time, a more lively fire can be built by gradually adding fuel until reaching the maximum amount suggested (see "hourly fuel consumption" in the chart under section 1.3.2) and once the fire is established, keep it for about 2 hours, maintaining the air damper open.

⚠ CAUTION: Children must be supervised by an adult in order to prevent them from touching the appliance hot parts or modifying its functions.

ⓘ **The metal component parts of the appliance are coated with a special high temperature paint that will reticulate, chemically stabilize and become fully heat resistant after the first few lightings. During this chemical reaction, the paint will smell bad and release vapours, thus it is recommended that the room be properly aerated. When this process is finished, no more bad smell and vapours will be released during the appliance normal operation.**

Diffusion of the heat produced is done by radiation and natural convection (natural air movement by thermal convection) from the front and outside the appliance.

3.2 Following lightings

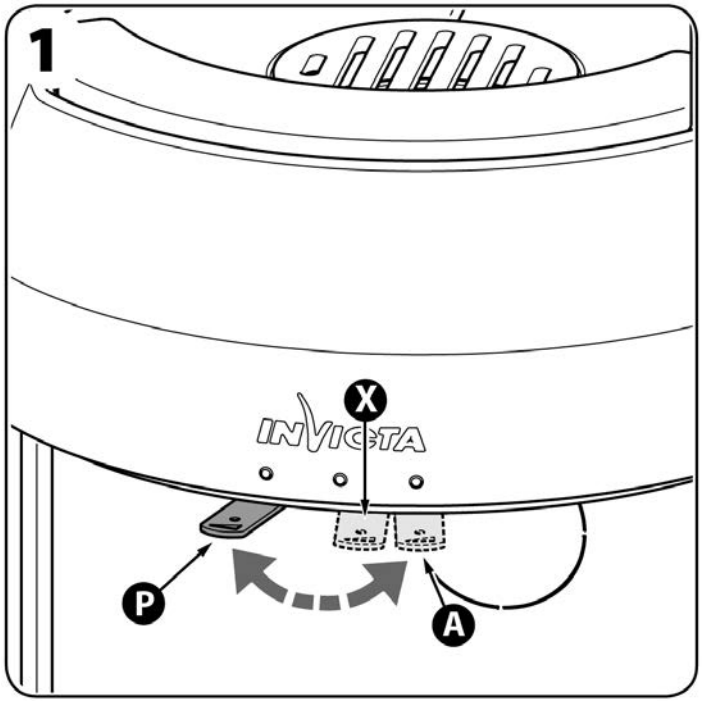
Before lighting the fire, if necessary, clean the door glass ceramic (see section 4.1.2) and the hearth, and empty the ash collecting box (see section 4.1.3).

Ignition instructions.
On lighting the fire set the controls as follows:

- By opening this register between P and X air is introduced into the combustion chamber through the upper firebox door and double combustion. A more efficient and less polluting combustion is thus generated because post-combustion is performed by burning the particles that were not burnt during the first combustion. This will increase the efficiency of the appliance and reduce waste.
- By opening this register between X and A air will also be added to the combustion chamber through the grille.

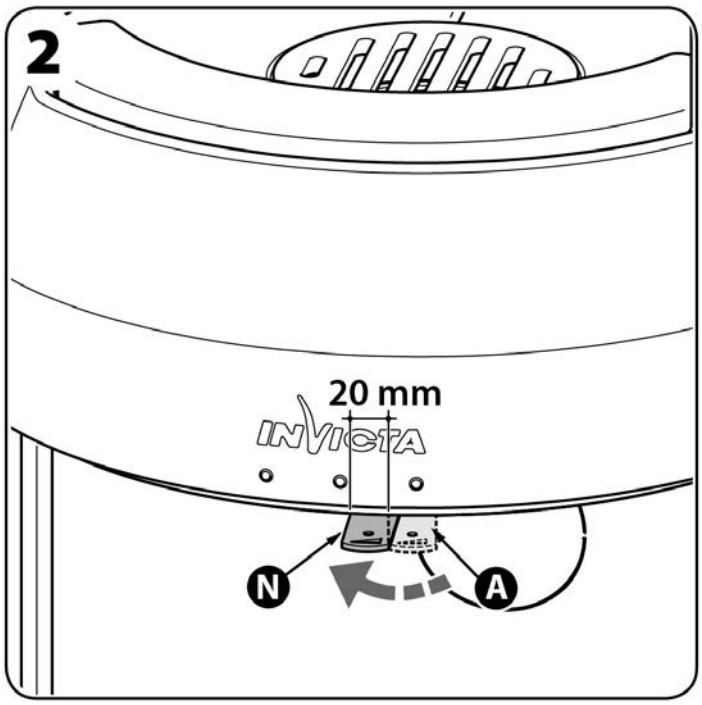
ⓘ **IMPORTANT: By keeping this damper open, the appliance glass will get dirty less quickly.**

To obtain maximum power, open the air inlet register of the appliance, and to obtain minimum power we will have to close it instead. For normal use, it is recommended to set the register to the centre notch N.



Instructions for use at rated thermal power.
Several parameters need to be considered to obtain the nominal heat output.
The air inlet register should be set as shown in the figure.
Two 0.9 kg logs (13.5% moisture content) must be burned to achieve the nominal heat output.

P. "Prolonged burning" All left position - closed register.
N. "Nominal output" position.
(20 mm from A towards P).
A. "Power on" All right position - open register (to be used only for power on and recovery phases, keeping the appliance under surveillance!).



It may seem easy to light a fire in a wood-burning appliance but it actually is not. You should not play with fire, you should take great precaution and follow the instructions given in this chapter very carefully.
To start the fire safely use the traditional "firelighter cubes" instead of grease-proof or printed paper, or other products available on the market specifically designed to make the lighting of the fire easy, and follow the instructions supplied.
Such products contain special substances and they keep the flame burning longer, giving the fire time to set well into the wood.
Put a firelighter cube on the hearth, prepare a bed with small, thin pieces of dry wood (the smaller and dryer they are the better they will catch fire). Cross the wood pieces in a stack, so as to let air pass in between them: if the wood is piled too tightly, it will not burn properly.
When the fire is well established and a bed of embers has formed (after about 15 min.), put additional wood pieces of bigger dimensions, again in crossed position, but do not exceed the optimum amount of fuel (see "hourly fuel consumption" in the chart under section 1.3.2).

⚠ **WARNING: Perform this operation with gloves to avoid burning your hands.**

ⓘ **Check that the chimney draws well. Many chimneys in case of low pressure or when they are cold may present draught problems. If draught is good, you can light the fire from the bottom of the wood stack; if draught is poor, the stack must be built with highly combustible, very thin pieces of soft wood providing a lively fire, which should heat up the chimney flue rapidly and prevail over draught problems.**

Wait for the fire to set-in properly (about one hour) then adjust the air flow by adjusting the combustion air control (see figures 1 and 2); it is very important that both the appliance and the chimney flue be sufficiently warm to keep a good draught and reach the critical temperature ensuring the proper combustion of wood.

When the fire is well established the firebox may be reloaded in accordance with the already recommended optimum amounts of fuel (wood logs not longer than 33 cm with 30/35 cm girth). With the amount of fuel indicated above, approximately, the appliance will achieve the heat efficiency declared with an ideal ratio of fuel consumption to heat output.

ⓘ **The use of wood amounts much larger than those indicated will not only have a harmful effect on the consumption-to-output ratio, but may eventually reduce the durability of the structure.**
When loading the firebox, gently set the firewood pieces down on the ash-riddling grate.

⚠ **WARNING: Never use flammable liquids (alcohol or petrol) to speed up the lighting of a wood fire: it is extremely dangerous. Alcohol and petrol release highly flammable vapours, which could provoke the risk of burns.**

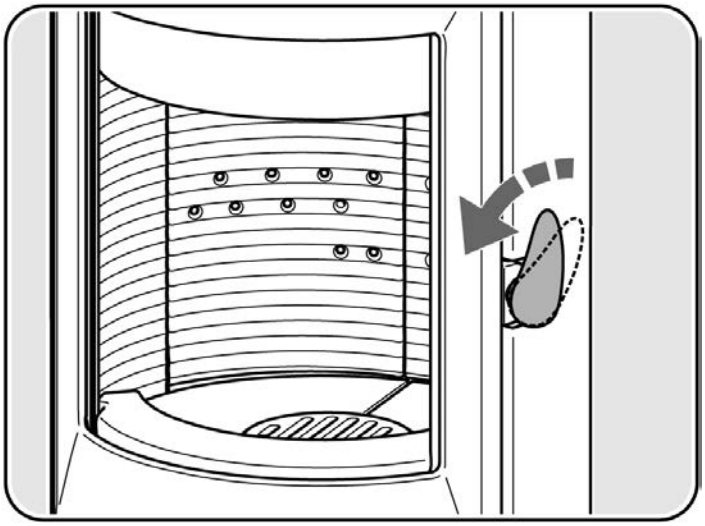
3.3 Combustion control and operation

Once the fire is lit, you should keep it efficient. For those who are not experienced and will use this appliance for the first time a period of adjustment will be needed. Here below find some tips for efficient lighting and burning:

- Only burn dry wood: wet or damp wood is hard to ignite, slow to burn, reduces the temperature inside the firebox and produces more smoke and less heat.
- A bed of live coals at the bottom of the fire keeps the firebox temperature high enough to ensure easy lighting of the new fuel and correct combustion; fill the firebox with additional fuel as soon as the firewood pieces turn into coals.
- Load the firebox with 3 or 4 wood pieces each time. In order to burn correctly wood needs a critical mass: flames develop only where the wood pieces touch one another, which means that a single piece of wood hardly burns. Never place the firewood pieces too close to one another in order to avoid starving the fire of oxygen.

Open the door slowly: Before opening the door completely, leave it partially opened for a few seconds. Should some smoke blow back, there is no danger, just aerate the room temporarily.

The door of the appliance must always be closed during operation.
When closing the door, check that it has closed properly by performing the movement shown in the figure.



- Never overload your appliance by placing more wood than the required optimum quantity (see section 1.3.2). A small fire receives more oxygen, burns better and produces more heat than a bulk fire, which chokes the the firebox.
- Try to reload your appliance before the fire goes out; always keep within reach some kindling or small wood pieces to relight the fire if necessary.
- Once the fire is burning, it is best to add small quantities of fuel at frequent intervals rather than to wait for longer periods of time to add large quantities of fuel.
- With the door closed you can achieve perfect control on the wood combustion by adjusting the combustion air control located at the base of the appliance with the result of saving a good deal of wood in comparison with traditional open fireplaces (Note: Even though the damper is set on the closed position, it slightly opens to ensure the normal operation of the heater).
- After reloading the firebox, in case it is necessary to relight the fire rapidly, it is recommended to fully open the combustion air control temporarily (see section 3.2, figure 1).

The use of the appliance as incinerator is FORBIDDEN: household rubbish, coated paper, painted or treated timber (including pallets), plastic or other synthetic materials must never be thrown into the fire.
Failure to do so causes the release of dangerous and toxic pollutants, which are highly noxious for you, your neighbours and the environment. Besides, burning household rubbish produces corrosive acids, which may seriously damage the internal parts of the appliance and the chimney flue, with consequential risk of fire of the chimney flue itself.

WARNING: Due to the high temperature changes to which the appliance is subjected, noise may occur during operation. These noises should not cause concern because they are due to the natural effects of expansion/contraction of its components.

4 CARE AND MAINTENANCE

4.1 Recurrent maintenance

The appliance should be cleaned regularly, as well as the connecting duct and the flue pipe, especially after long periods of inactivity.

WARNING: All cleaning of the various parts must be done when the appliance is completely cold and disconnected from the electrical power source.
Cleaning and maintenance operations to be carried out by the user cannot be done by unattended children.

4.1.1 Cleaning of metal parts

Clean with a dry, soft cloth; do not use any detergent or cleaning products.
Never put these parts in contact with water or other liquids. This could oxidize the parts and peel off the paint.

In case of excessive draft or fuel overload, you may notice a loss of paint intensity on the walls of the appliance.

WARNING: When cleaning glass with specific products, be careful not to splash or run these products over painted steel or painted cast iron.

4.1.2 Cleaning of ceramic glass

To perform if needed.

The quality and type of fuel as well as the way of use can determine the frequency of cleaning the ceramic glass.

Minor soot may accumulate due to incorrect combustion (an insufficient combustion air, a poor draught or the use of wet firewood pieces); the glass panel may self-clean satisfactorily under the restored good operational conditions.

To keep the glass clean for as long as possible, the secondary air damper must be opened. However, after hours of operation, the glass may get dirty.

1. We recommend the use of a specific glass cleaner for perfect cleaning;
2. spray some cleaner on a soft cloth to remove any tar and soot stains from the glass.

Never spray the ceramic glass directly with a specific glass cleaner or with any other cleaning product

The use of any abrasive sponges or similar for cleaning the ceramic glass panel is FORBIDDEN; failure to do so may result in permanent damage.

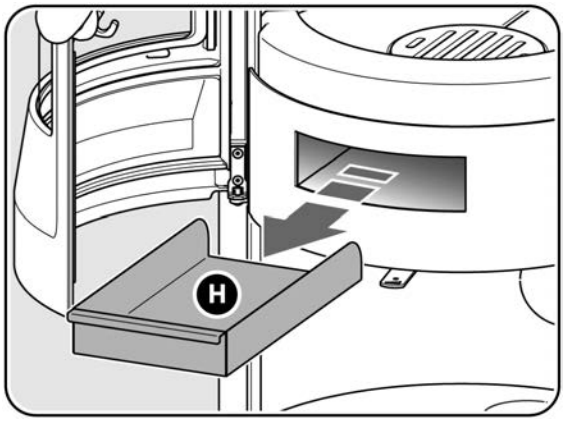
4.1.3 Ash removal

After using the appliance continuously, it is essential to remove the ash from the firebox.
The ash pan can be accessed through the appliance door.

Pull out the ash pan when cold, or use protection to avoid burns (glove).

The ash pan should not be emptied before it is full: some ash on the bottom may improve the combustion by acting as a natural insulator and by keeping coals alive at the bottom of the fire.

IMPORTANT: Disposed ashes contain small cinders which may flare up easily even after a long time; for this reason never remove ashes with a vacuum cleaner. Disposed ashes should always be temporarily placed in a closed metal container until all cinders have thoroughly cooled pending final disposal.



4.2 Routine maintenance

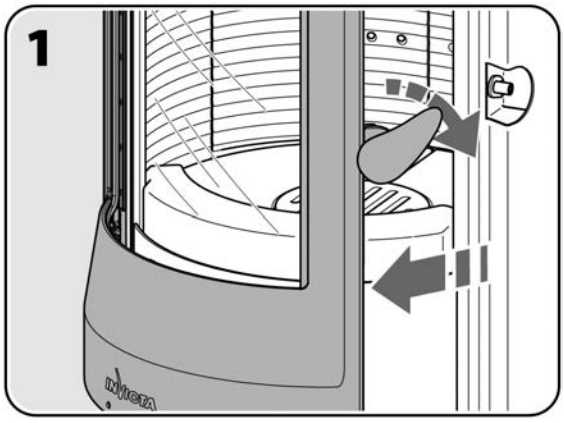
We recommend that the appliance and the chimney flue be thoroughly cleaned at least once a year. When the draught is too little, or when unsuitable wood is used, a more frequent cleaning may be needed.

WARNING: All cleaning and inspection work must be done when the appliance is completely cold.

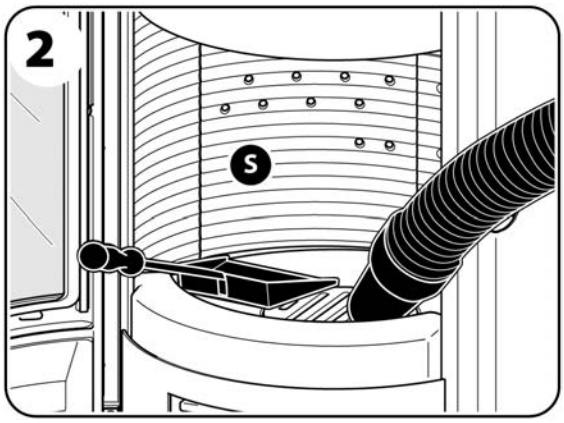
4.2.1 General cleaning

CAUTION: For safety reasons, before cleaning the appliance make sure the ashes have cooled completely and then remove them with a vacuum cleaner.

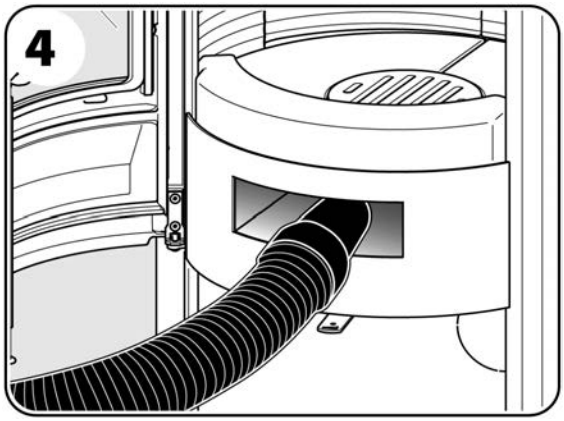
1. Open the appliance door slowly, so as to avoid the displacement of ashes accumulated.



2. Carry out appropriate cleaning operations inside the appliance with a wire brush and a sufficiently powerful vacuum cleaner (1000÷1300 W). Vacuum all ash deposited in the combustion chamber (S), removing any unburned wood and charcoal with the help of a metal ash scoop.



3. Grasp the ash pan [H] located below the combustion chamber and pull it out completely to empty it (see figure in section 4.1.3).
4. With a vacuum cleaner remove the ashes from the area underneath the ash collecting drawer.



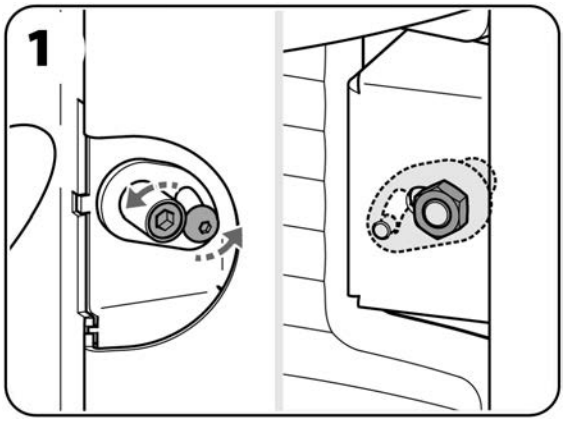
In the end correctly assemble the component parts removed in reversed sequence.

4.2.2 Gasket control

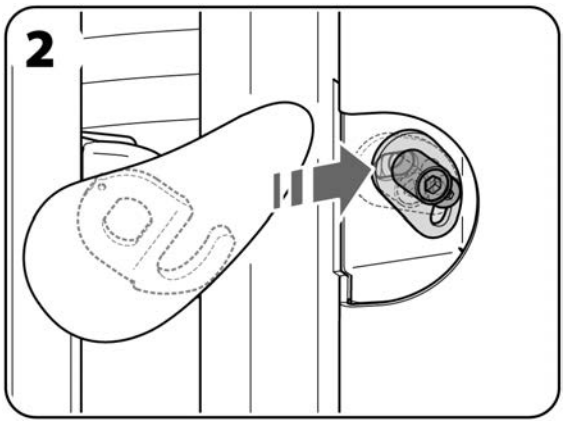
Check the integrity of the gaskets sealing the door regularly.
They should be replaced once every one or two or three years, depending on the type of appliance and mostly on the operation duration. In order to ensure an air-tight assembly the gaskets should maintain their characteristics of elasticity; as soon as they harden they need to be replaced.
If the air intake control has been set on the closed position and the fire still keeps burning briskly it may probably mean that the assembly is no longer sealed and airtight, and that is therefore time to replace the gaskets.

4.2.3 Handle adjustment

1. Using Allen wrenches with appropriate diameter, loosen the two screws that secure the door latch pin plate.



2. Slide the plate into its guides until the proper position is obtained to ensure optimal door closure, then re-tighten the fixing screws to maintain the new configuration.



4.2.4 Cleaning of chimney flue

Even with the best appliances and chimneys the formation of creosote deposits is unavoidable. Therefore it is necessary to clean the chimney and the vertical venting pipes regularly in order to avoid or reduce them.
Cleaning is recommended at least once a year and even more often if the appliance is used daily and fuel with features different from those illustrated in section 1.4 is employed.
We recommend to to let the cleaning process being realized by a professional chimney sweeper, ask the address to your dealer.
The sweeper's intervention may represent an effective and economic solution to protect the installation from corrosion and keep it in efficiency to grant those essential safety conditions that allow us to live with more serenity.

How soot and ash affect wood consumption: minor soot and ash are inevitably produced after the combustion (particularly after bad combustion); they do not convey any heat and tend to obstruct the pipes thus producing acid condensation and reducing the draught.
Regularly remove ash from the unit and clean the chimney flue.
A 2 mm thick deposit inside the heater can reduce the heat exchange by about 12%, which means that every 100 kg, 12 kg. of wood are wasted!
Excessive soot may also cause fire in the chimney flue with unpredictable consequences.

Just before the beginning of the next season, particularly as regards unoccuppied houses, we recommend checking the smoke channel and the chimney, in order to be sure that there is no clogging due to insects, birds or small mammals' nests.}

4.3 Failures/ Causes / Trouble-shooting

The fire hardly starts - The fire goes out:
- Green or moist wood: use hardwood, cut at least 2 years before and stored in sheltered and ventilated places.
- The logs are too big: use crumpled paper and dry wood for lighting. To maintain the fire use split logs.
- Low quality wood: Use hardwoods that give off a lot of heat and produce good embers (chestnut, ash, maple, birch, poplar, beech, etc.).
- Insufficient primary air: Fully open the primary and secondary air regulators or open the door even slightly. Open the air intake grille from outside.
- Insufficient draught: Check that the duct is not obstructed, clean if necessary. Check that the chimney is up to standard.

The fire is rekindled:
- Excess primary air: Partially or totally close the primary and secondary air intakes.
- Too much draught: Install a draught regulator.

There is smoke in the room:
- Check that the appliance door is perfectly closed.
- Check to see if the gaskets are in good condition.
- In the same room there could be another appliance working (stove, fireplace, wood cooker, suction hood) or not (open fireplace) whose draught may negatively affect that of your appliance or the reverse.
- Check to see if the exhaust system (pipe and chimney flue) is air-tight or needs to be cleaned out.
- Make sure that there is a good connection between the appliance and the chimney flue.
- The size of the chimney flue may not comply with the requirements in this manual (see technical sheet, section 1.3.2).
- The first times the appliance is operated, the paint on the metal surfaces releases some smells. Simply aerate the room as necessary.
- Check to see if any impediment (plants, buildings) exceeds the height of the chimney cap thus preventing the smoke discharge.
- The draught in the chimney flue may not be adequate.
- The wood used may not be of good quality (see section 1.4.1).
- If any air intake has been provided on the roof it may be close to the chimney flue opening.

Combustion is still lively with the air damper fully closed:
- There is probably a leakage in the airtight structure of the appliance; it is time to replace the gaskets.

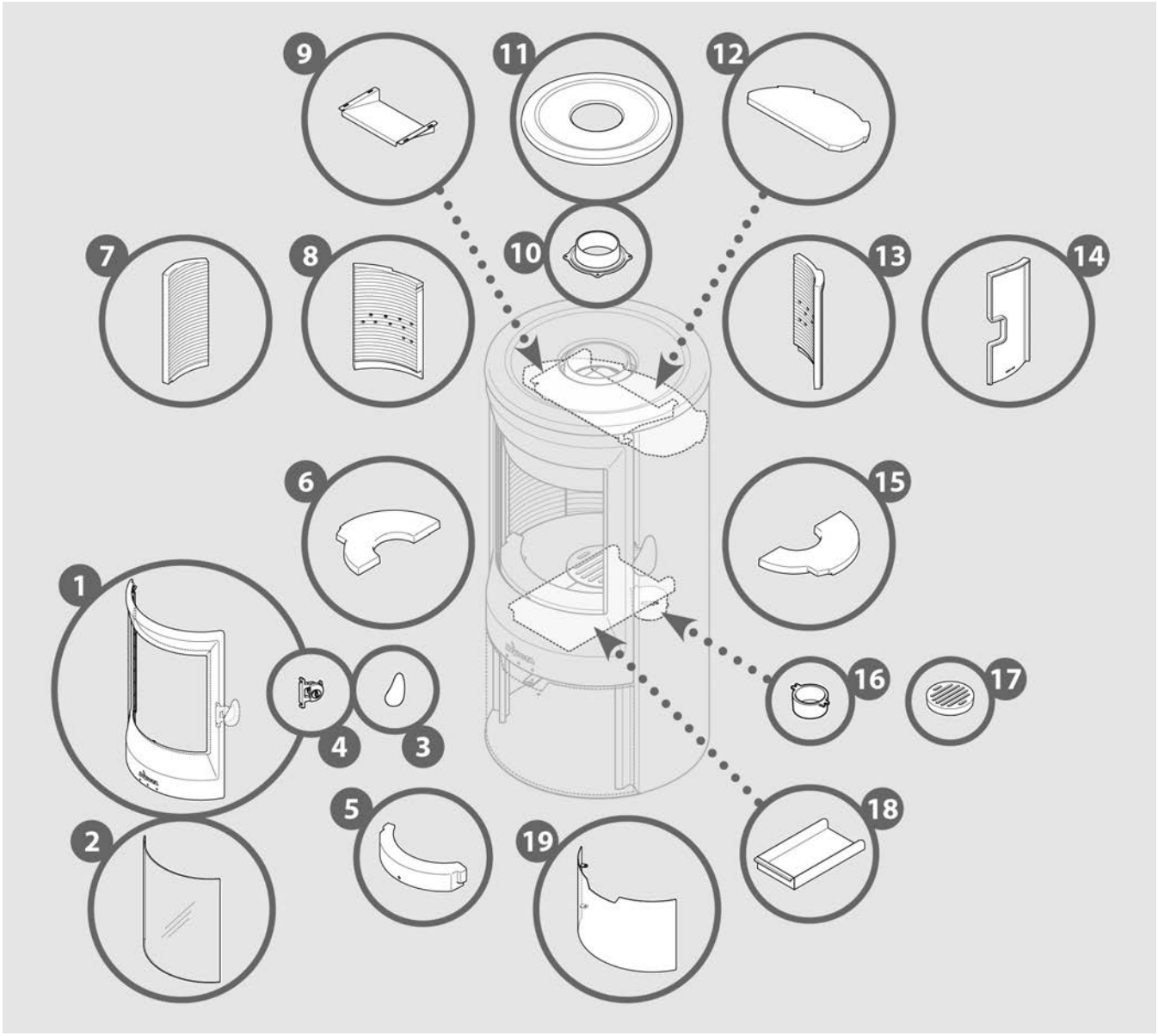
Insufficient heating:
- Low quality wood: use only the recommended fuel.

If after checking the previous solutions suggested the problem persists, ask for your dealer assistance service.

5 FOR THE AUTHORIZED SERVICE TECHNICIAN

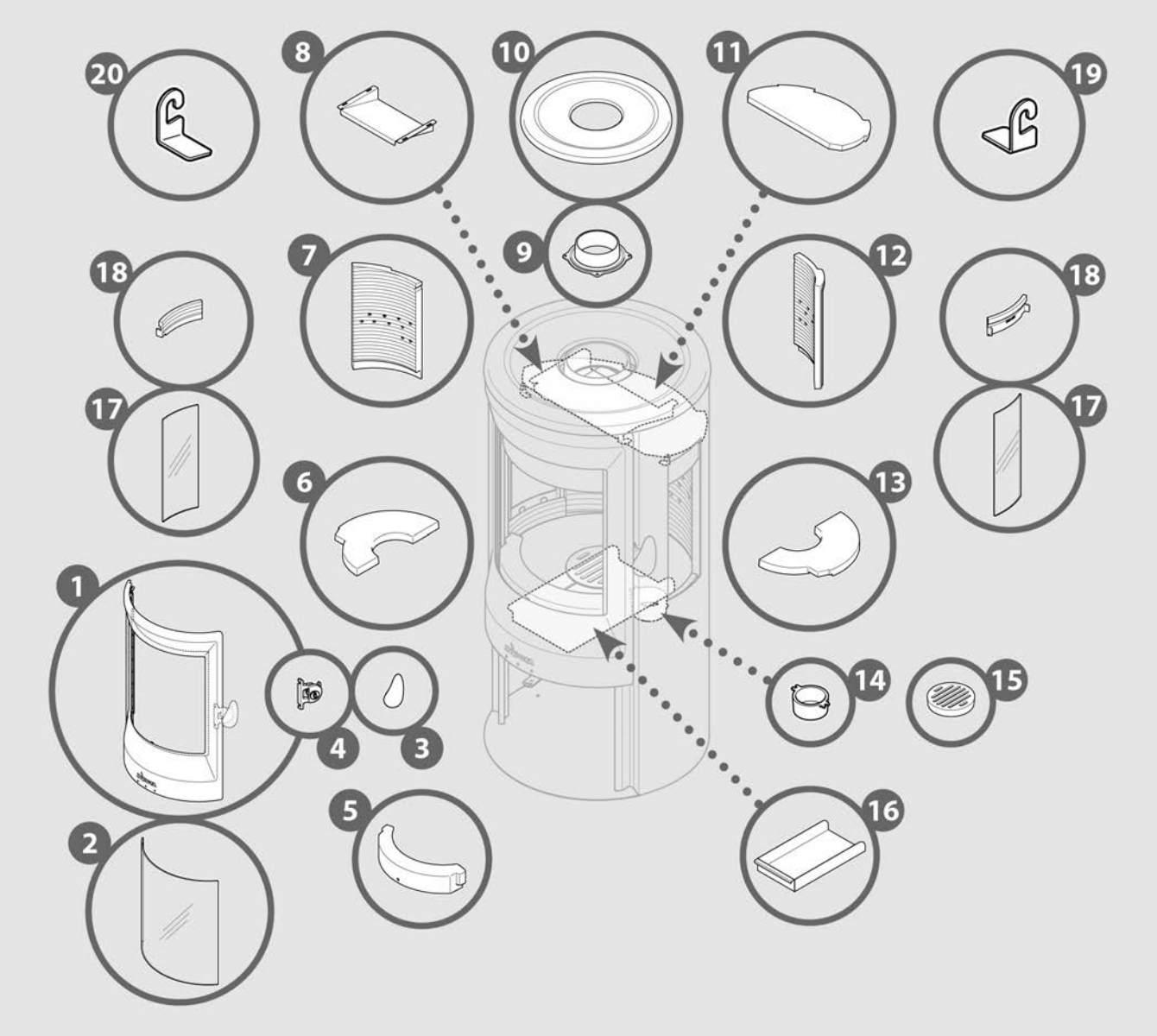
5.1 Spare parts list

NEOSEN PLUS - NEOSEN ETANCHE PLUS



1. 1121122301 - Complete door without glass
2. 1251300500 - Ceramic glass
3. 1121122501 - Handle
4. 1121122401 - Handle support
5. 1121120801 - Central protection
6. 1121120601 - Left base
7. 1121121301 - Left side element
8. 1121121601 - Left rear element
9. 1102144971 - Removable steel baffle
10. 1121121101 - Flue gas outlet connection Ø 150 mm
11. 1121120901 - Top
12. 1097306700 - Baffle
13. 1121121701 - Right rear element
14. 1121121401 - Right side element
15. 1121120701 - Right base
16. 1121121501 - Collar Ø 80 mm
17. 1121121001 - Grid for ash fall
18. 1102043070 - Ash collecting drawer
19. 1186146911 - Hatch

NEOSEN 3V PLUS



1. 1121122301 - Complete door without glass
2. 1251300500 - Ceramic glass
3. 1121122501 - Handle
4. 1121122401 - Handle support
5. 1121120801 - Central protection
6. 1121120601 - Left base
7. 1121121601 - Left rear element
8. 1102144971 - Removable steel baffle
9. 1121121101 - Flue gas outlet connection Ø 150 mm
10. 1121120901 - Top
11. 1097306700 - Baffle
12. 1121121701 - Right rear element
13. 1121120701 - Right base
14. 1121121501 - Collar Ø 80 mm
15. 1121121001 - Grid for ash fall
16. 1102043070 - Ash collecting drawer
17. 1251300600 - Ceramic side glass
18. 1121122101 - Side protection
19. 1102062170 - Right vermiculite support bracket
20. 1102062270 - Left vermiculite support bracket

5.2 Servicing record

1	3
2	

1	3
2	

1	3
2	

1	3
2	

1	3
2	

1	3
2	

1. DATE
2. SIGNATURE OF SERVICING STAFF
3. SERVICING DESCRIPTION

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