

Riscalda la vita.





MANUALE UTENTE PRODOTTI A LEGNA
WOOD PRODUCTS USER MANUAL
BENUTZERHANDBUCH HOLZPRODUKT
MANUEL UTILISATEUR PRODUITS À BOIS
MANUAL DEL USUARIO PRODUCTOS DE LEÑA



INSERTO CRYSTAL 50 - 50V BII - 50V P30 - 70 - 80EVO 2.0 - 80 PRS - 100



INSTALLAZIONE. INSTALLATION. INSTALLATION. L'INSTALLATION. LA INSTALACIÓN.

PRIMA DELL'INSTALLAZIONE ESEGUIRE LE SEGUENTI VERIFICHE.

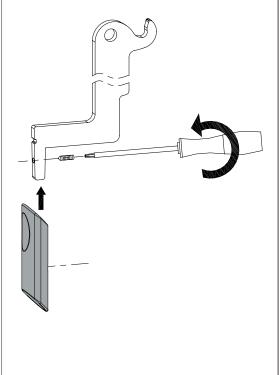
BEFORE THE INSTALLATION PERFORM THE FOLLOWING CHECKS.

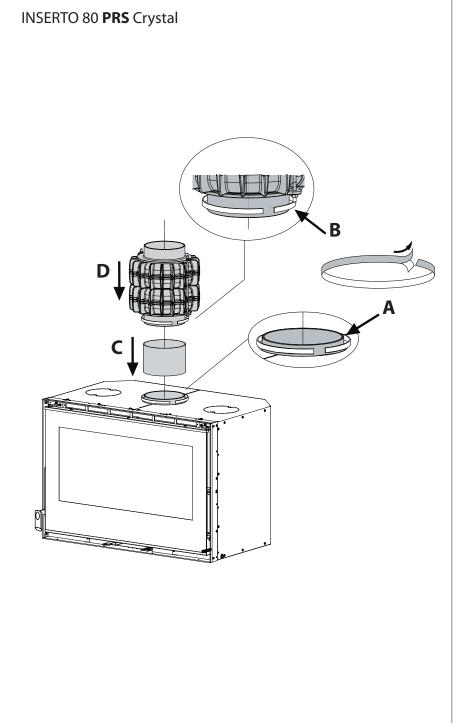
VOR DER AUFSTELLUNG FOLGENDE PRÜFUNGEN AUSFÜHREN.

AVANT L'INSTALLATION IL FAUT RÉALISER LES SUIVANTES VÉRIFICATIONS.

ANTES DE LA INSTALACIÓN, REALIZAR LOS CONTROLES SIGUIENTES

INSERTO 50 Crystal
INSERTO 50V BII Crystal
INSERTO 50V-p30 Crystal
INSERTO 70 Crystal
INSERTO 80 Evo Crystal 2.0
INSERTO 80 PRS Crystal
INSERTO 100 Crystal







A ATTENTION





SURFACES CAN BECOME VERY HOT! ALWAYS USE PROTECTIVE GLOVES!

During combustion, thermal energy is released that significantly increases the heat of surfaces, doors, handles, controls, glass, exhaust pipes, and even the front of the appliance. Avoid contact with those elements if not wearing protective clothing (protective gloves included). Make sure children are aware of the danger and keep them away from the stove during operation.

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We thank you for having chosen our company; our product is a great heating solution developed from the most advanced technology with top quality machining and modern design, aimed at making you enjoy the fantastic sensation that the heat of a flame gives, in complete safety.

WARNINGS

This instructions manual is an integral part of the product: make sure that it always accompanies the appliance, even if transferred to another owner or user, or if transferred to another place. If it is damaged or lost, request another copy from the area technician. This product is intended for the use for which it has been expressly designed. The manufacturer is exempt from any liability, contractual and extracontractual, for injury/damage caused to persons/animals and objects, due to installation, adjustment and maintenance errors and improper use.

Installation must be performed by qualified staff, which assumes complete responsibility for the definitive installation and consequent good functioning of the product installed. One must also bear in mind all laws and national, regional, provincial and town council Standards present in the country in which the appliance has been installed, as well as the instructions contained in this manual.

The Manufacturer cannot be held responsible for the failure to comply with such precautions.

After removing the packaging, ensure that the content is intact and complete. Otherwise, contact the dealer where the appliance was purchased.

All electric components that make up the product must be replaced with original spare parts exclusively by an authorised aftersales centre, thus guaranteeing correct functioning.

SAFETY

- THE APPLIANCE MAY BE USED BY CHILDREN 8 YEARS OF AGE OR OLDER AND INDIVIDUALS WITH REDUCED PHYSICAL, SENSORY, OR MENTAL CAPACITIES OR WITHOUT EXPERIENCE OR THE NECESSARY KNOWLEDGE, PROVIDED THAT THEY ARE SUPERVISED OR HAVE RECEIVED INSTRUCTIONS ON SAFE USE OF THE APPLIANCE AND THAT THEY UNDERSTAND THE INHERENT DANGERS.
- THE GENERATOR MUST NOT BE USED BY PERSONS (INCLUDING CHILDREN) WITH REDUCED PHYSICAL, SENSORY AND MENTAL CAPACITIES OR WHO ARE UNSKILLED PERSONS, UNLESS THEY ARE SUPERVISED AND TRAINED REGARDING USE OF THE APPLIANCE BY A PERSON RESPONSIBLE FOR THEIR SAFETY.
- ◆ THE CLEANING AND MAINTENANCE REQUIRED BY THE USER MUST NOT BE PERFORMED BY CHILDREN WITHOUT SUPERVISION.
- CHILDREN MUST BE CHECKED TO ENSURE THAT THEY DO NOT PLAY WITH THE APPLIANCE.
- ◆ DO NOT TOUCH THE GENERATOR WHEN YOU ARE BAREFOOT OR WHEN PARTS OF THE BODY ARE WET OR DAMP.
- ◆ THE SAFETY AND ADJUSTMENT DEVICES MUST NOT BE MODIFIED WITHOUT THE AUTHORISATION OR INDICATIONS OF THE MANUFACTURER.
- DO NOT PULL, DISCONNECT, TWIST ELECTRIC CABLES LEAVING THE STOVE, EVEN IF DISCONNECTED FROM THE ELECTRIC POWER SUPPLY MAINS.
- IT IS ADVISED TO POSITION THE POWER SUPPLY CABLE SO THAT IT DOES NOT COME INTO CONTACT WITH HOT PARTS OF THE APPLIANCE.
- DO NOT CLOSE OR REDUCE THE DIMENSIONS OF THE AIRING VENTS IN THE PLACE OF INSTALLATION. THE AIRING VENTS ARE ESSENTIAL FOR CORRECT COMBUSTION.
- DO NOT LEAVE THE PACKAGING ELEMENTS WITHIN REACH OF CHILDREN OR UNASSISTED DISABLED PERSONS.
- THE HEARTH DOOR MUST ALWAYS BE CLOSED DURING NORMAL FUNCTIONING OF THE PRODUCT.
- WHEN THE APPLIANCE IS FUNCTIONING AND HOT TO THE TOUCH, ESPECIALLY ALL EXTERNAL SURFACES, ATTENTION MUST BE PAID
- ◆ CHECK FOR THE PRESENCE OF ANY OBSTRUCTIONS BEFORE SWITCHING THE APPLIANCE ON FOLLOWING A PROLONGED PERIOD OF INACTIVITY.



- THE GENERATOR HAS BEEN DESIGNED TO FUNCTION IN ANY CLIMATIC CONDITION. IN PARTICULARLY ADVERSE CONDITIONS (STRONG WIND, FREEZING) SAFETY SYSTEMS MAY INTERVENE THAT SWITCH THE GENERATOR OFF. IF THIS OCCURS, CONTACT THE TECHNICAL AFTER-SALES SERVICE AND ALWAYS DISABLE THE SAFETY SYSTEMS.
- ◆ IN THE EVENT THE FLUE CATCHES FIRE, USE SUITABLE SYSTEMS FOR SUFFOCATING THE FLAMES OR REQUEST HELP FROM THE FIRE BRIGADE.
- ◆ THIS APPLIANCE MUST NOT BE USED TO BURN WASTE
- ◆ DO NOT USE ANY FLAMMABLE LIQUIDS FOR IGNITION
- ◆ THE MAJOLICAS ARE TOP QUALITY ARTISAN PRODUCTS AND AS SUCH CAN HAVE MICRO-DOTS, CRACKLES AND CHROMATIC IMPERFECTIONS. THESE FEATURES HIGHLIGHT THEIR VALUABLE NATURE. DUE TO THEIR DIFFERENT DILATION COEFFICIENT, THEY PRODUCE CRACKLING, WHICH DEMONSTRATE THEIR EFFECTIVE AUTHENTICITY. TO CLEAN THE MAJOLICAS, IT IS RECOMMENDED TO USE A SOFT, DRY CLOTH. IF A DETERGENT OR LIQUID IS USED, THE LATTER COULD PENETRATE INSIDE THE CRACKLES, HIGHLIGHTING THEM.

GENERAL PRECAUTIONS

La NORDICA S.p.A. responsibility is limited to the supply of the appliance.

The installation must be carried out scrupulously according to the instructions provided in this manual and the rules of the profession. Installation must only be carried out by a qualified technician who works on behalf of companies suitable to assume the entire responsibility of the system as a whole.

La NORDICA S.p.A. declines any responsibility for the product that has been modified without written authorisation as well as for the use of non-original spare parts.

This appliance is not suitable for the use of inexperienced people (included children) or with physical, sensorial and mental reduced capacities. They have to be controlled and educated in the use of the appliance from a responsible person for their security. The children have to be controlled to be sure that they would not play with the appliance. (EN 60335-2-102/7.12).

It is OBLIGATORY to respect the National and European rules, local regulations concerning building matter and also fireproof rules.



NO MODIFICATIONS CAN BE CARRIED OUT TO THE APPLIANCE. La NORDICA S.p.A. cannot be held responsible for lack of respect for such precautions.

DECLARATION OF CONFORMITY OF THE MANUFACTURER

Object: Absence of asbestos and cadmium

We declare that the materials used for the assembly of all our appliances are without asbestos parts or asbestos derivates and that in the material used for welding, cadmium is not present, as prescribed in relevant norm.

Object: CE n. 1935/2004 regulation.

We declare that in all products we produce, the materials which will get in touch with food are suitable for alimentary use, according to the a.m. CE regulation.

INSTALLATION REGULATIONS

Installation of the product and auxiliary equipment in relation to the heating system must comply with all current Standards and Regulations and to those envisioned by the law.

The installation and the relating to the connections of the system, the commissioning and the check of the correct functioning must be carried out in compliance with the regulations in force by authorised professional personnel with the requisites required by the law, being national, regional, provincial or town council present in the country within which the appliance is installed, besides these present instructions.

Installation must be carried out by authorised personnel who must provide the buyer with a system declaration of conformity and will assume full responsibility for final installation and as a consequence the correct functioning of the installed product.

Before installing the appliance, carry out the following checks:

- Verify if your structure can support the weight of the appliance. In case of insufficient carrying capacity it is necessary to adopt appropriate measures, La NORDICA responsibility is limited to the supply of the appliance (See chapter TECHNICAL DESCRIPTION).
- Make sure that the floor can support the weight of the appliance, and if it is made of flammable material, provide suitable insulation (DIMENSIONS ACCORDING TO REGIONAL REGULATIONS).
- · Make sure that there is adequate ventilation in the room where the appliance is to be installed.
- Do not install the appliance in rooms containing collective ventilation ducts, hoods with or without extractor, type B gas
 appliances, heat pumps, or other appliances that, operating at the same time, can put the room in depression (ref. UNI 10683
 standard)



- Make sure that the flue and the pipes to which the appliance will be connected are suitable for its operation. It is NOT allowed
 the connection of various appliances to the same chimney.
- The diameter of the opening for connection to the chimney must at least correspond to the diameter of the flue gas pipe. The opening must be equipped with a wall connection for the insertion of the exhaust pipe and a rosette.
- Always leave the recommended air pocket between the appliance and the walls, rear and side min. (see MARKING INFORMATION).
- Establish the type of ventilation (natural or forced) see chapter VENTILATION HOOD OR ADJACENT LOCAL.
- By means of the adjustable feet and using a level make sure that the device is perfectly levelled to allow a correct sliding of the door.

After testing the proper working of the appliance, some days from the installation, it is possible to proceed with the construction of its aesthetic covering.

WARNING - During the surround building operations it must kept in mind possible and subsequent electrical installed parts maintenance (Fans, temperature probe, etc) and with hydraulic systems all parts connected to the product.



WARNING - WHEN INSTALLING INSERTS, ACCESS MUST BE PREVENTED TO THE INTERNAL PARTS OF THE APPLIANCE AND IT MUST NOT BE POSSIBLE TO ACCESS LIVE PARTS DURING EXTRACTION OPERATIONS. ANY WIRING, FOR EXAMPLE THE POWER CABLE OR ROOM PROBE, MUST BE POSITIONED SO AS NOT TO BE DAMAGED DURING MOVEMENT OF THE INSERT AND MUST NOT COME INTO CONTACT WITH HOT PARTS.



La NORDICA S.p.A. declines all responsibility for damage to things and/or persons caused by the system. In addition, it is not responsible for any product modified without authorisation and even less for the use of non original spare parts.

Your regular local chimney sweep must be informed about the installation of the appliance so that he can check the correct connection to the chimney.

FIRE-FIGHTING SAFETY MEASURES

When installing the appliance, the following safety measures must be observed:

- a) In order to ensure sufficient thermal insulation, respect the minimum safety distance from objects or furnishing components flammable and sensitive to heat and from materials with flammable structure (see DECLARATION OF PERFORMANCE Picture 7 A..).

 All the minimum safety distances are shown on the product data plate and lower values must not be used.
- b) in front of the furnace door, in the radiation area, there must be no flammable or heat-sensitive objects or material at a distance of less than ... Picture 7 A... This distance can be reduced to 40 cm where a rear-ventilated, heat-resistant protection device is installed in front of the whole component to protect;
- c) If the product is installed on a no totally refractory floor, one must foresee a fireproof background. **The floors made of inflammable material**, such as moquette, parquet or cork etc., **must be covered** by a layer of no-inflammable material (size according to regional law see **Picture 1**)

The ash drawer must always be inserted when the appliance is in operation.

The solid combustion residues (ashes) must be collected in a metal container that is hermetically sealed and fire resistant. The appliance must never be lit in the presence of gaseous emissions or vapours (for example: glue for linoleum, petrol, etc,). Do not place flammable materials in the vicinity of the appliance.



During the combustion, thermal air is emitted by involving the heating of areas, door and glass hearth, of the door handles or controls, of the smokes pipe and, in case, of the front part of appliance. Avoid to touch those parts without a protective clothing or without accessory tools (gloves resistant to heat, control devices). Ensure children are aware of these dangers and keep them away from the furnace when it is on. Warn children that the device becomes very hot and that it must not be touched.

When using the wrong fuel or one which is too damp, due to deposits present in the flue, a flue fire is possible.

FIRST-AID MEASURES

Should any fire arise in the stack or in the flue:

- a) Close the feeding door.
- b) Close the registers of combustion air
- c) Extinguish the fire using carbon dioxide fire-fighting means (CO₂ dust).
- d) Seek immediate intervention of FIRE BRIGADE.

DO NOT EXTINGUISH FIRE USING WATER JETS. When the flue does not burn any more please arrange an examination by a specialist in order to find possible cracks and permeable points.

BEAM PROTECTIONS

Considering the irradiation of the hearth, it is necessary to be particularly careful in protecting the beams while designing your stack. Consider the proximity of beams to the external surfaces of the hearth, on one side, and the irradiation of the glass door, usually very close to the beams, on the other side. In any case, it has to be considered that the internal or lower surfaces of this beam in flammable material must not come in contact with temperatures higher than 65 °C. **Picture 2** gives some examples of execution.



WARNING: We cannot be made liable for a wrong operation of the plant, when it does not comply with the provisions of these instructions or when it uses additional products not suitable for this device.

ENGLISH ENGLISH



TECHNICAL DESCRIPTION

The appliance is made up of a steel chamber completely soldered and hermetic. The hearth is coated by single cast-iron sheets and refractory plates (NORDIKER). The appliances are equipped with an integrated air circuit for the recovery of the heat made up of a galvanized steel carter external to the heating body. Inside the hearth there are a grate holder and the related grating, both made of very thick cast-iron and easily extractable. The appliance works as an intermittent operating appliance.

The insert is equipped with a sight door with ceramic glass (resistant up to 700°C). This allows a charming sight on burning flames. Moreover, in this way, any possible leak of sparks and smoke is avoided. Under the hearth grating there is a easily extractable ash drawer.

	GLOVE	Ventilation KIT 1318000	SECONDARY air KIT
SERIES	SERIES	1	6016040 OPTIONAL
SERIES	SERIES	1	6016040 OPTIONAL
SERIES	SERIES	1	6016040 SERIES
SERIES	SERIES	* OPTIONAL	601604 1 OPTIONAL
SERIES	SERIES	* OPTIONAL	601604 1 OPTIONAL
SERIES	SERIES	* OPTIONAL	601604 1 OPTIONAL
SERIES	SERIES	* OPTIONAL	601604 1 OPTIONAL
	SERIES SERIES SERIES SERIES SERIES SERIES SERIES	SERIES	SERIES SERIES / SERIES SERIES / SERIES SERIES * OPTIONAL SERIES SERIES * OPTIONAL SERIES SERIES * OPTIONAL

* see instructions manual CONNECTION AND MAINTENANCE OF VENTILATION OPTIONAL.

The heating of the room occurs:

- a) by convection: the passage of air through the coating and the covering hood releases heat in the room.
- **b) by radiation**: through the sight glass and the steel body, heat is radiated into the room.

The device is equipped with registers of primary and secondary air, with which it is possible to adjust the combustion air.

1A - PRIMARY air register (Picture 8)

With the air register located under the door of the hearth (on the left), it is possible to adjust the air flow through the ash drawer and the grating in direction of the fuel. The primary air is necessary for the combustion process during the ignition. In order to open the passage of primary air the lever should be completely pulled.

The ash drawer has to be emptied regularly, so that ash cannot hinder the intake of primary air for the combustion. Primary air is also necessary to keep fire live.

During the combustion of wood, the primary air register must be opened only a few, since otherwise the wood burns quickly and the device can overheat (see chapter NORMAL OPERATION).

2A - SECONDARY air register (Picture 83)

Under the door of the hearth (on the right) there is the secondary air register.

This register must be opened (and therefore the lever completely pushed), in detail, for the combustion of wood, so that unburnt carbon can be subject to a post-combustion, increasing the yield and assuring the cleaning of the glass (see chapter NORMAL OPERATION). It is possible to get the air SECONDARY directly from outside through a flexible tube (fireproof NOT furnished Picture 11 Ref A).

The adjustment of the registers necessary to reach the rated calorific yield is the following one:

	INSERTO 50 Crystal	INSERTO 50v Crystal BII	INSERTO 50v p30 Crystal	INSERTO 70 Crystal	INSERTO 80 Cry EVO 2.0	INSERTO 80 Cry PRS	INSERTO 100 Crystal
Hourly consumption (kg/h)	1,8	2,4	1,7	2,7	2,1	2,2	2,8
PRIMARY AIR	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED	CLOSED
SECONDARY AIR	OPENED	OPENED	OPENED	OPENED	OPENED	OPENED	OPENED
TERTIARY AIR	PRE- ADJUSTED	PRE- ADJUSTED	PRE- ADJUSTED	PRE- ADJUSTED	PRE- ADJUSTED	PRE- ADJUSTED	NO

FLUE

Essential requirements for a correct operation of the device:

- the internal section must be preferably circular;
- be thermally insulated and water-proof and produced with materials suitable to resist to heat, combustion products and possible condensates;
- not be throttled and show a vertical arrangement with deviations not greater than 45°;
- if already used, it must be clean;
- all the sections of the flue gas duct must be accessible to inspection;
- · inspection openings must be provided for cleaning.
- · observe the technical data of the instructions manual;

Should the flues have a square or rectangular section, internal edges must be rounded with a radius not lower than 20 mm. For the rectangular section, the maximum ratio between the sides must be = 1.5.

A too small section causes a decrease of the draught. It is suggested a minimum height of 4 m.



The following features are **FORBIDDEN** and therefore they endanger the good operation of the device: asbestos cement, galvanized steel, rough and porous internal surfaces. In **Picture 3** gives some examples of execution.



For a correct installation please respect the sections/lengths of the flue shown in the technical data table. By installations with different dimensions the flue must be suitably sized in accordance with EN13384-1.

The draught created by the flue must be sufficient, but not excessive.

A too big flue section can feature a too big volume to be heated and consequently cause difficulties in the operation of the device; to avoid this, tube the flue along its whole height. A too small section causes a decrease of the draught.



ATTENTION: as far as concern the realisation of the flue connection and flammable materials please follow the requirements provided by UNI 10683 standard. The flue must be properly spaced from any flammable materials or fuels through a proper insulation or an air cavity.

It is **FORBIDDEN** to let plant piping or air feeding channels pass in the same flue. Moreover, it is forbidden to create movable or fixed openings on the same for the connection of further other devices (**Picture 4**).

CHIMNEY CAP

The draught of the flue depends also on the suitability of the chimney cap.

Therefore, if it is handicraft constructed, the output section must be more than twice as big as the internal section of the flue (Picture 5). Should it be necessary to exceed the ridge of the roof, the chimney cap must assure the discharge also in case of windy weather (Picture 6). The chimney cap must meet the following requirements:

- have internal section equivalent to that of the stack.
- have a useful output section twice as big as the flue internal one.
- be manufactured in such a way as to prevent the penetration of rain, snow, and any other foreign body in the flue.
- be easily checkable, for any possible maintenance and cleaning operation

CONNECTION TO THE FLUE

The connection to the stack must be performed with stiff pipes in steel comply with all current Standards and Regulations and to those envisioned by the Law.



It is FORBIDDEN to use metallic pipes or pipes in asbestos cement since they jeopardize the safety of the fitting itself, considering that they are subject to tears or breaks resulting in leaks of smoke.

The exhaust pipe must be air-tight fastened to the stack and can have a maximum inclination of 45°; this to avoid excessive deposits of condensate produced in the initial start-up phases and/or the excessive gripping of soot and moreover it avoids the slowing down of the smokes at output.

The failed tightness of the connection can cause the malfunction of the device.

The internal diameter of the connection pipe must be equal to the external diameter of the smokes stub pipe of the device. This is assured by the pipes complying with DIN 1298.

The chimney pressure (DRAUGHT) must be at least (see chap. TECHNICAL DATA SHEET). The measurement has always to be carried out with hot device (rated thermal performance).

When the depression exceeds 17 Pascal (=1.7 mm of column of water), it is necessary to reduce the same by installing an additional draught regulator (butterfly valve).



IMPORTANT: When using metallic pipes, they must be insulated with proper materials (coatings in insulating fibers resistant up to 600°C) in order to avoid deterioration of walls or of the counter-hood.

Before positioning the insert in the pre-existing fireplace, it is necessary to close the upper internal part of the stack using (properly pre-drilled) sheet metal or any other kind of fire-resistant material that can support very high temperatures without suffering any damage. (see **Picture 7** pos. **1 Inserti - Picture 13**).

AIR FOR COMBUSTION

It is necessary to ventilate continuously the space included between the upper part, the sides of the device and the deflector of the fire-proofing material of the hood.

For this reason, it is necessary to foresee an intake of air from the bottom (intake of fresh air) and a high output (output of hot air).

Each of these openings must be free and it should not be possible to obstruct it; moreover, they must have a minimum surface of at least 3 dm² (example: 30 x 10 cm grating).

In this way, the following targets are achieved:

- · a greater safety
- an increase of the heat created by air circulation around the device.
- a better working of the appliance



The heat vent grating (Picture 7 pos. 6 - Picture 13) has to be installed on the upper part of the hood at about 20 cm from the roof. This must always be installed since its function is that of letting the heat collected within the hood (overpressure) flow out into the room.



VENTILATION AND AERATION OF THE INSTALLATION PREMISES

As the product draw their combustion air from the place of installation, it is **MANDATORY** that in the place itself, a sufficient quantity of air is introduced. If windows and doors are airtight (e.g. built according to energy saving criteria), it is possible that the fresh air intake is no longer quaranteed and this jeopardises the draught of the appliance and your health and safety.

IMPORTANT: For a better comfort and corresponding oxygenation of environment, the combustion air can be directly withdrawn at the outside through a junction which is to be connected with a flexible pipe. The connection pipe (not furnished) must be flat with a minimum diameter of **Picture 11**, a maximum length of 4 m and with no more than 3 bends. If there is a direct connection with the outside it must be endowed with a special windbreak.

There **MANDATORY** be sufficient quantity of air for combustion and re-oxygenation of the room to ensure the device will work properly. There should therefore be vents letting air in from outside the building and enabling circulation of air for combustion even when the doors and windows are closed.

The air inlets must meet the following requirements:

- they must be protected with grids, metal mesh, etc., but without reducing the net useful section;
- they must be made so as to make the maintenance operations possible;
- · positioned so that they cannot be obstructed;
- Any extractor hoods in the room where the device is installed must not operate at the same time as this could cause smoke to enter the
 room, even with the fireplace's door closed.

The clean and non-contaminated air flow can also be obtained from a room adjacent to that of installation (indirect aeration and ventilation), as long as the flow takes place freely through permanent openings communicating with the outside.

The adjacent room cannot be used as a garage, or to store combustible material or for any other activity with a fire hazard, bathroom, bedroom or common room of the building.

Ventilation is deemed sufficient when the room is equipped with air inlets according to the table:

Appliance categories	Reference standard	Percentage of the net opening section with respect to the appliance fumes outlet section	Minimum net opening value of the ventilation duct
Fireplaces	UNI EN 13229	50%	200 cm ²
Stoves	UNI EN 13240	50%	100 cm ²
Cookers	UNI EN 12815	50%	100 cm ²



Installation in premises with fire hazards is forbidden. Installation in residential premises in which, in any case, the depression measured during installation between the internal and external environment is greater than 4 Pa - reference for Italy according to standard UNI10683.

All national, regional, provincial and municipal laws and standards in force in the country where the appliance is installed must be complied with.

VENTILATION HOOD OR ADJACENT LOCAL

Our products are equipped with tangential fans suitable to improve the distribution of heat through the ventilation exclusively of the installation room (see chapter **SERIES VENTILATION**).

On our products, it is possible to install **OPTIONAL ventilation kits** (NO Inserto 50 - NO Inserto 80 High Pressure) suitable to improve the distribution of heat by ventilation only either of the installation room or of the adjacent local.

The product can distribute heated air by natural convection or forced convection by means of a centrifugal fan (OPTIONAL); therefore, during installation, it is necessary to establish the type of ventilation or convection to be adopted.

The covering of each product is equipped with 2 outputs with a diameter of 150 mm (15 cm) for the connection of pipes resistant to heat.

- a) Perform the drilling on the walls or on the existing hood to allow the passage and the application of the (fire-resistant) hoses with related openings.
- b) Fasten the pipes by means of clamps to the related collars and openings, after having removed the semi-blanks caps (see **Picture 10**).
- c) Each pipe must not exceed 1.5 m of length for natural ventilation and 4 m for forced ventilation; it must be insulated with insulating materials to avoid noise and dispersion of heat.
- d) The openings have to be positioned at a height not lower than 2 m from the floor to avoid that hot air at output meets people. Please respect the distance of the convection openings according to the local construction norms;
- e) The lengths of the canalization pipes must have the same length to avoid the distribution of differing quantities of air from each output (see **Picture 10**).
- f) If the space between the upper part of the insert and the lower profile of the hood is lower than 10 cm, it is necessary to perform a hole of about 30 x 40 cm on the hood to allow the fastening of the hoses;
- g) The OPTIONAL ventilation kit has to be installed below the appliance in the rear part (see instructions manual CONNECTION AND MAINTENANCE OF VENTILATION OPTIONAL). As consequence you should arrange a underlying space to collocate it, allowing a proper air flow and the accessibility for future maintenance.

INSERTO 50V- p30 Crystal: To ease the natural circulation of air (upward movement due to the heating of the same) in the external enclosure of the stack, it is necessary to remove the underlying semi-blanks (see **Picture 10**).



CONNECTION AND MAINTENANCE OF VENTILATION



The control unit and the plant must be installed and connected by authorized personnel according to the standards in force (see chapter GENERAL PRECAUTIONS).

ATTENTION: the control unit and the feeding cable must not be in contact with hot parts.

Our products are equipped with tangential fans suitable to improve the distribution of heat through the ventilation exclusively of the installation room (see chapter TECHNICAL DATA SHEET).

The lighting and the adjustment is carried out through the proper standard supplied control unit that has to be installed far from any direct heat source.

The selection of the kind of insert to be connected is in the control unit and has to be done by moving the small bridge **7** as shown hereafter before the INSERT starts to operate (see chapter SERIES VENTILATION).

This operation must be done without electric energy!!

On our products, it is possible to install OPTIONAL ventilation kits suitable to improve the distribution of heat by ventilation only either of the installation room or of the adjacent local (see chapter VENTILATION HOOD OR ADJACENT LOCAL).

For the connection of the ventilation kit, please see the instructions manual CONNECTION AND MAINTENANCE OF VENTILATION OPTIONAL.

CONNECTION: Connect the power supply cable of the control unit to a bipolar switch respecting at least a 3 mm distance between the contacts (power supply 230 V~ 50 Hz, it is necessary to provide for the correct connection to the grounding plant). **This operation must be done without electric energy!!**



WARNING: The COMMAND must be connected to the mains with a differential line cut-off switch according to the regulations in force. Correct operation of the command is assured only for the proper motor for which it has been manufactured. **Improper use relieves the manufacturer from each responsibility**.

ALLOWED / NOT ALLOWED FUELS

Allowed fuels are logs. Use exclusively dry logs (max. content of water 20%). Maximum 3 logs should be loaded. The pieces of wood should have a length of ca. 20-30 cm and a maximum circumference of 30-35 cm.

Compressed not worked-out wood briquettes must be used carefully to avoid overheating that may damage the device, since these have a very high calorific value.

The wood used as fuel must have a humidity content lower than the 20% and must be stored in a dry place. Humid wood tends to burn less easily, since it is necessary a greater quantity of energy to let the existing water evaporate. Moreover, humid content involves the disadvantage that, when temperature decreases, the water condensates earlier in the hearth and therefore in the stack causing a remarkable deposit of soot with following possible risk of fire of the same.

Fresh wood contains about 60% of H₂O, therefore it is not suitable to be burnt.

It is necessary to place this wood in a dry and ventilated place (for example under a roofing) for at least two years before using it.

Besides others, it is not possible to burn: carbon, cuttings, waste of bark and panels, humid wood or wood treated with paints, plastic materials; in this case, the warranty on the device becomes void.

Paper and cardboard must be used only to light the fire.

The combustion of waste is FORBIDDEN and would even damage the appliance and the flue, causing health damages and claims by the neighborhood owing to the bad smell.

The wood is not a fuel which allows a continuous operation of the appliance, as consequence the heating all over the night is not possible.

Variety	kg/mc	kWh/kg moistness 20%
Beech	750	4,0
Oak	900	4,2
Elm	640	4,1
Poplar	470	4,1
Larch*	660	4,4
Spruce*	450	4,5
Scots pine *	550	4,4

^{*} RESINOUS WOOD NOT SUITABLE FOR THE BURNING



ATTENTION : the continuous and protracted use of aromatic wood (eucalyptus, myrtle etc.) quickly damages the cast iron parts (cleavage) of the product.

The declared technical data have been achieved by burning beech wood class "A1" according to the requirement UNI EN ISO 17225-5 and wood moisture content less than 20%. By burning a different kind of wood the efficiency of the product itself could change and some specific adjustments on the appliance could be needed.



LIGHTING

After the first ignition you can smell bad odours (owing to the drying of the glue used in the garnitures or of the paint) which disappear after a brief using of the appliance. A good ventilation of the room should always be guaranteed.

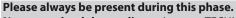


To light the fire, it is suggested to use small wood pieces together with paper or other traded lighting means.

It is FORBIDDEN to use any liquid substance as for ex. alcohol, gasoline, oil and similar.

Open the primary air completely.

When wood starts to burn, it is possible to feed it again by opening slowly the door, in order to avoid leaks of smoke, and close the primary air register and control the combustion through the secondary air register according to the provisions of chapter TECHNICAL DESCRIPTION.



Never overload the appliance (see cap.TECHNICAL DESCRIPTION - Hourly consumption).

Too much fuel and too much air for combustion can cause overheating and therefore damage the same.

Never switch on the device when there are combustible gases in the room.

To perform a correct first lighting of the products treated with paints for high temperature, it is necessary to know the following information:

- the construction materials of the involved products are not homogeneous, in fact there are simultaneously parts in cast iron, steel, refractory material and majolica;
- the temperature to which the body of the product is subject is not homogeneous: from area to area, variable temperatures within the range of 300°C 500°C are detected;
- during its life, the product is subject to alternated lighting and extinguishing cycles in the same day, as well as to cycles of intense use
 or of absolute standstill when season changes;
- the new appliance, before being considered seasoned has to be subject to many start cycles to allow all materials and paints to complete the various elastic stresses;
- in detail, initially it is possible to remark the emission of smells typical of metals subject to great thermal stress, as well as of wet paint. This paint, although during the manufacture it is backed at 250 °C for some hours, must exceed many times and for a given period of time the temperature of 350 °C before becoming completely embedded in the metallic surfaces.

Therefore, it is extremely relevant to take these easy steps during the lighting:

- 1. Make sure that a strong air change is assured in the room where the appliance is installed.
- 2. During the first starts, do not load excessively the combustion chamber (about half the quantity indicated in the instructions manual) and keep the product continuously ON for at least 6-10 hours with the registers less open than the value indicated in the instructions manual.
- 3. Repeat this operation for at least 4-5 or more times, according to your possibilities.
- 4. Then load more and more fuel (following in any case the provisions contained in the installation booklet concerning maximum load) and, if possible, keep the lighting periods long avoiding, at least in this initial phase, short ON/OFF cycles.
- 5. During the first starts, no object should be leaned on the appliance and in detail on enamelled surfaces. Enamelled surfaces must not be touched during heating.
- 6. Once the «break-in» has been completed, it is possible to use the product as the motor of a car, avoiding abrupt heating with excessive loads



After testing the proper working of the appliance, some days from the installation, it is possible to proceed with the construction of its aesthetic covering.

WARNING: During the surround building operations it must kept in mind possible and subsequent electrical installed parts maintenance (Fans, temperature probe, etc.) and with hydraulic systems all parts connected to the thermo-fireplace.

LOW EMISSION FIRE LIGHTING

Smokeless combustion is a way of lighting a fire able to significantly reduce the emission of harmful substances. The wood burns gradually from the top downwards, so combustion is slower and more controlled. Burnt gases pass through the high temperatures of the flame and therefore burn almost completely.

Place the logs in the hearth a certain distance apart as shown in the **Picture 9.** Arrange the largest at the bottom and the smallest at the top, or vertically in the case of tall narrow combustion chambers. Place the fire starter module on top of the pile, arranging the first logs in the module at right angles to the pile of wood.

Fire STARTER MODULE

This fire starter module replaces a paper or cardboard starter.

Prepare four logs, 20 cm long with a cross section of 3 cm by 3 cm **Picture 9**. Cross the four logs and place them on top of the pile of wood at right angles, with the fire lighter (wax impregnated wood fibre for example) in the middle. The fire can be lit with a match.

If you want, you can use thinner pieces of wood. In this case, you will need a larger quantity.

Keep the flue gas exhaust valve and combustion air regulator open (1A - 2A). After lighting the fire, leave the combustion air regulator open in the position shown in the Picture.

IMPORTANT:

- do not add further wood between one complete load and the next;
- do not suffocate the fire by closing the air intakes;
- regular cleaning by a chimney sweep reduces fine particle emissions.

These instructions are backed by ENERGIA Legno SVIZZERA www.energia-legno.ch



NORMAL OPERATION

After having positioned the registers correctly, insert the indicated hourly wood load avoiding overloads that cause anomalous stresses and deformations. You should always use the product with the door closed in order to avoid damages due to overheating (forge effect). The inobservance of this rule makes the warranty expire.

With the registers located on the front of the device, it is possible to adjust the heat emission of the same. They have to be opened according to the calorific need. The best combustion (with minimum emissions) is reached when, by loading the wood, most part of the air for combustion flows through the secondary air register.



Never overload the appliance. Too much fuel and too much air for the combustion may cause overheating and then damage the product.

You should always use the appliance with the door closed in order to avoid damages due to overheating (forge effect).

The adjustment of the registers necessary to reach the rated calorific yield with a depression at the stack of Pascal (see chap. TECHNICAL DATA SHEET) is the following one: see chap. TECHNICAL DESCRIPTION. **The appliance works as an intermittent operating appliance**.

Besides the adjustment of the air for the combustion, the intensity of the combustion and consequently the thermal performance of the device is influenced by the stack. A good draught of the stack requires a stricter adjustment of air for combustion, while a poor draught requires a more precise adjustment of air for combustion.

To verify the good combustion, check whether the smoke coming out from the stack is transparent.

If it is white, it means that the device is not properly adjusted or the wood is too wet; if instead the smoke is gray or black, it signals that the combustion is not complete (it is necessary a greater quantity of secondary air).



WARNING: When fuel is added onto the embers in the absence of a flame, a considerable amount of fumes may develop. Should this happen, an explosive mixture of gas and air may form, and in extreme cases an explosion may occur. For safety reasons it is advisable to perform a new lighting procedure with the use of small strips.

OPERATION DURING TRANSITION PERIODS

During transition periods when the external temperatures are higher, if there is a sudden increase of temperature it can happen that the combustion gases inside the flue cannot be completely sucked up.

The exhaust gases do not come out completely (intense smell of gas). In this case, shake the grating more frequently and increase the air for the combustion. Then, load a reduced quantity of fuel in order to permit a rapid burning (growing up of the flames) and the stabilization of the draught.



Then, check that all openings for the cleaning and the connections to the stack are air-tight. In case of doubt, do not operate the product.



MAINTENANCE AND CARE

ALWAYS FOLLOW THE INSTRUCTIONS IN COMPLETE SAFETY!

- Make sure that the power cord is unplugged (if present).
- · That the generator is cold all over.
- The ashes are completely cold.
- Ensure efficient air exchange in the room during the product cleaning operations.
- Poor cleaning will compromise correct operation and safety!

PERIODIC CLEANING UNDER USER'S RESPONSIBILITY

The periodic cleaning operations, as indicated in this use and maintenance manual, must be performed with the utmost care after reading the instructions, procedures and frequency described in this use and maintenance manual.

Check the external air intake, by cleaning it, at least once a year. The stack must be regularly swept by the chimney sweeper. Let your chimney sweeper in charge of your area check the regular installation of the device, the connection to the stack and the aeration.



IMPORTANT: THE MAINTENANCE AND CARE MUST BE CARRIED OUT ONLY AND EXCLUSIVELY WITH COLD DEVICE. You should only use spare parts approved and supplied by **La NORDICA S.p.A.**. Please contact your specialized retailer if you require spare parts.

YOU MUST NOT MAKE ANY CHANGES TO THE DEVICE!!!

GLASS CLEANING

Thanks to a specific inlet of secondary air, the accumulation of dirty sediments on the glass-door is reduced with efficacy. Nevertheless this can never be avoided by using solid fuels (particularly wet wood) and it has not to be understood as a defect of the appliance.



IMPORTANT: The cleaning of the sight glass must be carried out only and exclusively with cold device to avoid the explosion of the same. For the cleaning, it is possible to use specific products or a wet newspaper paper ball passed in the ash to rub it.

Do not use cloths, abrasive or chemically aggressive products by cleaning the hearth glass.

The correct lighting phase, the use of proper quantities and types of fuels, the correct position of the secondary air regulator, enough draught of the chimney-flue and the presence of combustion air are the essential elements for the optimal functioning of the appliance and for the cleaning of the glass.



BREAK OF GLASSES: Given that the glass-ceramic glasses resist up to a heat shock of 750°C, they are not subject to thermal shocks. Their break can be caused only by mechanic shocks (bumps or violent closure of the door, etc.). Therefore, their replacement is not included in the warranty.

CLEANING OUT THE ASHES

All the devices are equipped with a hearth grating and an ash drawer for the collection of the ashes.

It is suggested to empty periodically the ash drawer and to avoid it fills completely in order not to overheat the grating. Moreover, it is suggested to leave always 3-4 cm of ash in the hearth.



CAUTION: The ashes removed from the hearth have to be stored in a container made of fire-resistant material equipped with an air-tight cover. The container has to be placed on a fire-resistant floor, far from flammable materials up to the switching off and complete cooling.

CLEANING THE FLUE

The correct lighting phase, the use of proper quantities and types of fuels, the correct position of the secondary air regulator, enough draught of the chimney-flue and the presence of combustion air are the essential elements for the optimal functioning of the appliance.

The device should be completely cleaned at least once a year or every time it is a needed (in case of bad working and low yield). An excessive deposit of soot can cause problems in the discharge of smokes and fire in the flue.



The cleaning must be carried out exclusively with cold equipment. This operation should be carried out by a chimney sweeper who can simultaneously perform an audit of the flue (checking of possible deposits).

During the cleaning, it is necessary to remove the ash drawer, the grating, and the smoke deflectors from the device in order to ease the fall of the soot. The deflectors can be easily extracted from their seats since they are not fastened using screws. Once the clearing has been carried out, place them back in their seats (Picture 12).



CAUTION: The lack of the deflectors causes a strong depression, with a too fast combustion, an excessive consumption of wood with related overheating of the device.

SUMMER STOP

After cleaning the hearth, chimney and hood, totally eliminating the ash and other eventual residues, close all the doors of the hearth and the relevant registers; in case you disconnect the appliance from the chimney you must close its openings in order to let work others possible appliances connected to the same flue.

We suggest performing the cleaning operation of the flue at least once per year; verifying in the meantime the actual status of the rope seals,



which cannot ensure the good operation of the equipment if they are not in good condition and are not making a good seal! In this case the seals must be replaced.

In presence of dampness in the room where the stove has been placed, we advise you to put absorbent salts into the hearth.



If you want to keep for long the aesthetic look of the cooker it is important to protect its internal walls in row cast iron with neutral Vaseline.

ROUTINE MAINTENANCE PERFORMED BY QUALIFIED TECHNICIANS

Routine maintenance must be performed at least once a year.

Using wood as solid fuel, the generator requires annual routine maintenance, which must be performed by a **qualified technician**, **using only original spare parts**.

Failure to comply can jeopardise the safety of the appliance and make the warranty null and void.

Respecting the frequencies of cleaning reserved for the user described in the use and maintenance manual, the generator is guaranteed correct combustion over time, preventing any anomalies and/or malfunctioning that could require more interventions of the technician. Requests for routine maintenance are not contemplated in the product warranty.

GASKETS

The gaskets guarantee the tightness of the stove and its consequent good functioning.

They must be controlled periodically. They must be replaced immediately if they are worn or damaged.

These operations must be carried out by a qualified technician.

CONNECTION TO THE FLUE

Vacuum and clean the pipe that leads to the flue yearly or any time that it is necessary. If there are horizontal tracts, the residue must be removed before it can prevent the passage of the fumes.

CALCULATION OF THE THERMAL POWER

There is not an absolute rule for calculating the correct necessary power. This power is given according to the space to be heated, but it depends also largely on the insulation. On an average, the calorific value necessary for a properly insulated room is **30 kcal/h per m³** (for an external temperature of 0°C).

Given that 1 kW corresponds to 860 kcal/h, it is possible to adopt a value of 35 W/m³.

Let's suppose one wishes to heat a room of 150 m³ (10 x 6 x 2.5 m) in an insulated apartment. In this case, it is necessary to have 150 m³ x 35 W/m³ = 5250 W or 5,25 kW. As main heating, a 8 kW device is therefore sufficient.

		Approximate combustion value		Required quantity in relation to 1 kg of dry wood
Fuel	Unit	kcal/h	kW	
Dry wood (15% humidity)	kg	3600	4.2	1,00
Wet wood (50% humidity)	kg	1850	2.2	1,95
Wood briquettes	kg	4000	5.0	0,84
Brown coal briquettes	kg	4800	5.6	0,75
Normal anthracite	kg	7700	8.9	0,47
Coke	kg	6780	7.9	0,53
Natural gas	m³	7800	9.1	0,46
Naphtha	L	8500	9.9	0,42
Electricity	kW/h	860	1.0	4,19



GUARANTEE TERMS

1. La Nordica S.p.A. products are guaranteed, within the European community, for 24 months from the date of purchase. Purchase has to be proved by means of a valid fiscal document issued by the seller (receipt, invoice or shipment document) identifying the purchased product and its purchase and/or delivery date.

WARNING: This conventional guarantee does not replace the guarantee regulated by the European legislation on consumer rights.

The conventional guarantee is only applicable to the Italian region and to those areas, within the European Community, where the Authorised Technical Assistance Centres are active (see the www.lanordica-extraflame.com website)

It is also limited to the state of residence of the consumer, which must coincide with the premises and/or registered office of the seller of the La Nordica S.p.A. product

These regulations do not apply if the product is purchased within commercial, entrepreneurial, or professional circumstances. In these cases the product guarantee will be limited to a period of 12 months from the date of purchase.

ITALIAN GUARANTEE

What must be done if there is a product malfunction:

Consult the instructions manual to make sure the malfunction cannot be solved by using the product correctly. Make sure the malfunction is included in those covered by the guarantee; otherwise the cost of the intervention will be borne entirely by the consumer. When requesting the intervention of the Assistance service at the Authorised Assistance Centre, always specify: - type of malfunction - model of the appliance - complete address - phone number

EUROPEAN GUARANTEE

What must be done if there is a product malfunction:

Consult the instructions manual to make sure the malfunction cannot be solved by using the product correctly. Make sure the malfunction is included in those covered by the guarantee; otherwise the cost of the intervention will be borne entirely by the consumer. Request the intervention of the Assistance service or the address of the Authorised Technical Assistance Centre to the seller; always specify: type of malfunction, model of the appliance, complete address and phone number

If the malfunction arises in the first 6 months of the product's life, the consumer has the right to have the product repaired with no expense. From the seventh to the twenty-fourth month, if a malfunction arises, the consumer will bear the cost of the call, while the seller will pay for the manpower and for any spare parts used.

2. If the malfunction is linked to external events and/or conditions such as, including but not limited to, insufficient capacity of the systems; wrong installation and/or maintenance by the personnel which hasn't got the skills prescribed by the laws of the country of residence of the consumer; negligence; inability to use the product and wrong maintenance by the consumer, with respect to what is reported and recommended by the instructions manual of the product, which is part of the sales contract, this guarantee will be void.

Damage to the product that cannot be related to manufacturing defects are also not included in this guarantee. Similarly are excluded defects related to incorrect operation of the flue, according to the legislation in force in the country at the moment of purchase. Other exclusions include all product defects due to carelessness, accidental breakdown, tampering and/or damage during transport (scratches, dents, etc.), interventions carried out by unauthorised personnel and further damage caused by incorrect interventions by the consumer trying to arrange the initial malfunction.

The following consumables are excluded by the guarantee: gaskets, ceramic or tempered glasses, cast iron grilles or coatings, refractory materials (e.g. Nordiker or others), painted, chrome-plated or golden parts, majolica ware, handles, the brazier and its related components. For Idro products the heat exchanger is not covered by the guarantee if a suitable condensation-proof circuit is not set up to ensure a return temperature of the device of at least 55°C. The guarantee excludes all the external components on which the consumer can directly operate during use and/or maintenance or that can be subject to wear and/or rust and stains on steel due to aggressive detergents.

If malfunctions are signalled which are not later confirmed during check by an authorised technician, the cost of the intervention will be borne entirely by the consumer.

- 3. If it is not possible to restore product conformity by repairing it, the product/component will be replaced, the guarantee expiration date and conditions will remain the same established when the product/component to be replaced has been purchased.
- **4.** La Nordica S.p.A. cannot be held liable for injury or damage which may either directly or indirectly be caused to persons, animals and property ensuing from failure to observe all the instructions provided in the relevant instruction manual and the warnings regarding installation, use and maintenance of the product, that can also be downloaded on the website.
- 5. Interventions for adjusting and/or regulating the product for the type of fuel or other reasons are excluded by the guarantee.



- **6.** If the product is repaired in one of the Authorised Technical Assistance Centres indicated by La Nordica S.p.A. and if the product is replaced, transport will be free of charge. If the technician can repair the product at the user's place of residence and they refuse, transport to the workshop and redelivery will be paid by the consumer.
- 7. After the 24 months of the guarantee have elapsed any repair intervention cost will be completely borne by the consumer.
- 8. In the case of disputes the only competent court is that of the La Nordica S.p.A. registered office (Vicenza-Italy)

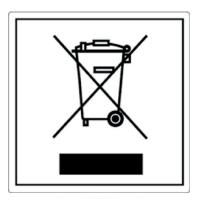
ADDITIONAL WARNINGS

- Only use the fuel recommended by the manufacturer. The product must not be used as an incinerator.
- Do not use the product as a ladder or supporting structure.
- Do not place laundry on the product to dry it. Any clothes-horse or similar objects must be kept at due distance from the product.
 Danger of fire or damage to the coating.
- The user is fully liable for any incorrect use of the product. The manufacturer bears no civil or criminal liability for incorrect use.
- Unauthorised tampering of any nature or replacement of spare parts of the product with non-original parts may endanger the operator and the manufacturer bears no civil or criminal liability for this.
- Large parts of the surface of the product can get very hot (door, handle, glass, smoke outlet pipes, etc.). Please therefore avoid coming
 into contact with these parts without wearing suitable protective clothing or using appropriate measures, such as heat protective
 gloves.
- DO NOT use the product with the door open or if the glass is broken.
- The product must be electrically connected to a system equipped with an operational earthing system.
- Turn off the product in the event of a failure or malfunctioning.
- Do not wash the product with water. Water may penetrate into the unit and cause faults in the electrical insulation. This can cause electric shocks.
- Installations not complying with the regulations in force, as well as incorrect use and failure to comply with the maintenance scheduled by the manufacturer, will invalidate the guarantee.



DISPOSAL

INFORMATION FOR MANAGEMENT OF ELECTRIC AND ELECTRONIC APPLIANCE WASTE CONTAINING BATTERIES OR ACCUMULATORS



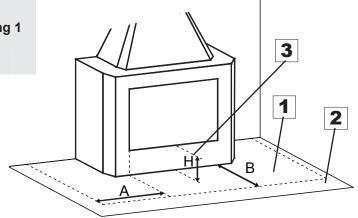
This symbol, which is used on the product, batteries, accumulators or on the packaging or documents, means that at the end of its useful life, this product, the batteries and the accumulators included must not be collected, recycled or disposed of together with domestic waste. Improper management of electric or electronic waste or batteries or accumulators can lead to the leakage of hazardous substances contained in the product. For the purpose of preventing damage to health or the environment, users are kindly asked to separate this equipment and/ or batteries or accumulators included from other types of waste and to arrange for disposal by the municipal waste service It is possible to ask your local dealer to collect the waste electric or electronic appliance under the conditions and following the methods provided by national laws transposing the Directive 2012/19/EU.

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

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

A KOTOICA®

Figura 1 Picture 1 Abbildung 1 Figure 1 Figura 1

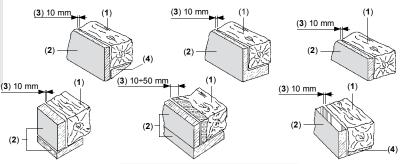


- Protezione del pavimento con materiale incombustibile
 Protection of the floor with incombustible material
 Schutzfußboden aus feuerhemmendem Material
 Protection du sol à l'aide de matériel ignifuge
 Protección del suelo con material incombustible
- Pavimentazione materiale combustibile Flooring in combustible material
- Fußboden aus entzündbarem Material Sol avec matière inflammable Suelo de material combustible
 - Altezza da terra del piano del focolare Height of the hearth surface from the ground
- Höhe über Boden der Feuerraumebene Hauteur du foyer depuis le sol Altura del plano del hogar respecto al suelo
- * COME DA DISPOSIZIONI REGIONALI ESISTENTI ACCORDING TO THE REGIONAL REGULATIONS - NACH DER REGIONALEN REGELUNGEN - SELON L'ORDONNANCE RÉGIONALE - CONFORME CON LA NORMATIVA LOCAL

A = H+20 cm = > 40 cmB = H+30 cm = > 60 cm A = Limite laterale della zona protetta / Side limit of the protected area / Seitengrenze des Geschützteiles / Limite latérale de la zone protégée / Límite lateral de la zona protegida

B = Limite frontale della zona protetta / Front limit of the protected area / Vordergrenze des Geschützteiles / Limite frontale de la zone protégée / Límite frontal de la zona protegida

Figura 2 Picture 2 Abbildung 2 Figure 2 Figura 2

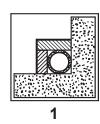


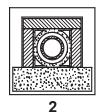
1	Trave / Beam / Träger / Poutre / Viga				
2*	Isolante materiale refrattario / Refractory insulating / Feuerfestes isolierende / Isolant matériau réfractaire / Aislante material refractario				
	Vueta d'aria / Air packet / Luftlach				

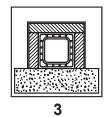
- Wuoto d'aria / Air pocket / Luftloch Vide D'air / Vacío de aire
 - Protezione metallica / Metallic protection / Metallische Schutzvorrichtung / Protection métallique / Protección metálica

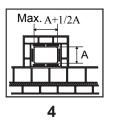
* COME DA DISPOSIZIONI REGIONALI ESISTENTI - ACCORDING TO THE REGIONAL REGULATIONS - NACH DER REGIONALEN REGELUNGEN - SELON L'ORDONNANCE RÉGIONALE - CONFORME CON LA NORMATIVA LOCAL

Figura 3
Picture 3
Abbildung 3
Figure 3
Figura 3









Canna fumaria in acciaio con doppia camera isolata con materiale resistente a 400°C. Efficienza 100% ottima.

Steel flue with double chamber insulated with material resistant to 400°C. Efficiency 100% excellent.

- 1* Schornsteinrohr aus Stahl mit doppelter mit 400°C beständigem Material verkleideter Kammer. Wirkungsgrad 100 % ausgezeichnet.
 - Conduit de fumée en acier avec double chambre isolée avec matériau résistant à 400°C. **Efficience 100% excellente.**Conducto de salida de humos de acero con doble cámara aislada con material resistente a 400 °C. **Eficiencia 100% óptima.**

Canna fumaria in refrattario con doppia camera isolata e rivestimento esterno in calcestruzzo alleggerito. **Efficienza 100% ottima.**

- Refractory flue with double insulated chamber and external coating in lightweight concrete. **Efficiency 100% excellent.**Schornsteinrohr aus feuerfestem Material mit doppelter isolierter Kammer und Außenverkleidung aus Halbdichtbeton. **Wirkungsgrad 100 %**
 - Conduit de fumée en réfractaire avec double chambre isolée et revêtement externe en béton allégé. **Efficience 100% excellente.**

Conducto de salida de humos de refractario con doble cámara aislada y revestimiento exterior de hormigón alivianado. Eficiencia 100% óptima.

Canna fumaria tradizionale in argilla sezione quadrata con intercapedini. Efficienza 80%buona.

Traditional clay flue square section with cavities. **Efficiency 80% good.**Traditionelles Schornsteinrohr aus Ton - viereckiger Querschnitt mit Spalten. **Wirkungsgrad 80 % gut.**

Conduit de fumée traditionnel en argile section carrée avec séparations. **Efficience 80% bonne.**

Conducto de salida de humos tradicional de arcilla de sección cuadrada con crujías. **Eficiencia 80% buena.**Evitare canne fumarie con sezione rettangolare interna il cui rapporto sia diverso dal disegno. **Efficienza 40% mediocre.**

Avoid flues with rectangular internal section whose ratio differs from the drawing. **Efficiency 40% poor.**

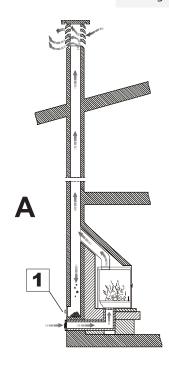
- Schornsteinrohre mit rechteckigem Innenquerschnitt sind zu vermeiden, dessen Verhältnis von der Zeichnung abweicht. Wirkungsgrad 40 % Éviter conduits de cheminée avec section rectangulaire interne dont le rapport soit différent du dessin. Efficience 40% médiocre.

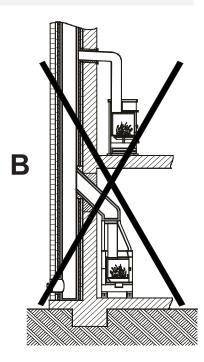
 No utilizar conductos de salida de humos con sección rectangular interior cuya relación sea diferente de la del dibujo. Eficiencia 40% mediocre.
 - Materiale conforme alle Norme e Regolamentazioni attuali ed a quanto previsto dalla Legge.
 - Material comply with all current Standards and Regulations and to those envisioned by the Law.
 - Material sämtlichen geltenden und vom Gesetz vorgesehenen Normen und Vorschriften entsprechen.
 - Matériau conforme à toutes les Normes et aux Réglementations actuelles prévues par la Loi.
 - Material cumplir con las normas y reglamentos vigentes y con todas las disposiciones establecidas por la ley.



Figura 4
Picture 4
Abbildung 4
Figure 4
Figura 4

Le immagini sono a scopo illustrativo The images are for illustration purposes. Die Abbildungen dienen nur der Veranschaulichung. Les images sont à titre illustratif. Las imágenes sirven solo como ejemplo ilustrativo.





Rappresentazione di canna fumaria corretta con sportello a tenuta per la raccolta e lo scarico dei materiali solidi incombusti.

Representation of a correct flue with air-tight door for the collection and discharge of solid unburnt materials.

Darstellung eines richtigen Schornsteinrohres mit dichter Tür für die Sammlung und Entleerung von ungebrannten Festmaterialen.

Représentation de conduit de fumée correcte avec porte étanche pour la récolte et déchargement des matériaux solides non brûlés.

Representación del correcto conducto de salida de humos con portezuela estanca para la recogida y la descarga de los materiales sólidos incombustos.

Sconsigliato il collegamento alla canna fumaria di più apparecchi. Ciascuno deve poter usufruire di una propria canna fumaria.

The connection of more than one device to the flue is not recommended. Each device must have its own flue.

DE - (Ja - ist zulässig)

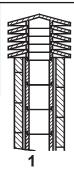
Déconseillée la connexion au conduit de fumée de plusieurs appareils. Chacun doit pouvoir se servir de son propre conduit de fumée.

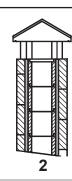
Desaconsejamos la conexión de más de un aparato al mismo conducto de salida de humos. Cada uno debe estar conectado a un conducto de salida de humos propio.

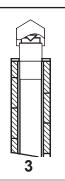
Sportello per la pulizia / Door for cleaning / Reinigungstür / Porte pour nettoyage / Puerta de limpieza

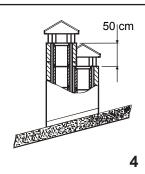
Figura 5
Picture 5
Abbildung 5
Figure 5
Figura 5

1











Comignolo industriale ad elementi prefabbricati, consente un ottimo smaltimento dei fumi.

Industrial chimney cap with pre-fabricated elements – it allows an excellent discharge of the smokes.

Industrialschornstein mit Fertigteilelemente - er gestattet eine ausgezeichnete Abgasentsorgung. Tête de cheminée industrielle à éléments préfabriqués, elle permet une excellente évacuation des fumées.

Sombrerete industrial de elementos prefabricados, permite una óptima eliminación de los humos.

Comignolo artigianale. La giusta sezione di uscita deve essere minimo 2 volte la sezione interna della canna fumaria, ideale 2,5 volte. Handicraft chimney cap. The right output section must be at least twice as big as the internal section of the flue (ideal value: 2.5 times).

2 Handwerklicher Schornstein. Der richtige Ausgangsquerschnitt muss mindestens 2 Male des Innenquerschnittes des Schornsteinrohrs betragen, ideal wäre: 2,5 Male.

Tête de cheminée artisanale. La juste section de sortie doit être minimum 2 fois la section interne du conduit de fumée, idéal 2,5 fois.

Sombrerete artesanal. La sección correcta de salida debe ser como mínimo 2 veces la sección interior del conducto de salida de humos, ideal 2,5 veces.

Comignolo per canna fumaria in acciaio con cono interno deflettore dei fumi.

Chimney cap for steel flue with internal cone deflector of smokes.

3 Schornstein für Schornsteinrohr aus Stahl mit einer Kegelförmigen Rauchumlenkplatte. Tête de cheminée pour conduit de fumée en acier avec cône interne déflecteur des fumées.

Sombrerete para conducto de salida de humos de acero con cono interior deflector de humos.

In caso di canne fumarie affiancate un comignolo dovrà sovrastare l'altro d'almeno 50 cm al fine d'evitare trasferimenti di pressione tra le canne stesse. In case of flues side by side, a chimney cap must be higher than the other one of at least 50 cm in order to avoid pressure transfers between the flues themselves.

Im Falle von naheliegenden Schornsteinrohren muss ein Schornstein den anderen um mindestens 50cm überragen, um Druckübertragungen unter den Schornsteinrohren selbst zu vermeiden.

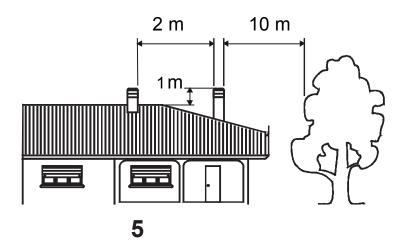
En cas de conduits de cheminée à côté, une tête de cheminée devra surmonter l'autre d'au moins 50 cm dans le but d'éviter transferts de pression parmi les conduits mêmes.

Em caso de condutas de evacuação de fumos paralelas, um dos cones de chaminé deve ser instalado em uma posição mais elevada (50 cm, pelo menos,) para impedir a transferência de pressão entre as próprias condutas.



Figura 6
Picture 6
Abbildung 6
Figure 6
Figura 6

5



Il comignolo non deve avere ostacoli entro i 10 m da muri, falde ed alberi. In caso contrario innalzarlo almeno di 1 m sopra l'ostacolo. Il comignolo deve oltrepassare il colmo del tetto almeno di 1 m.

The chimney cap must not show hindrances within 10 m from walls, pitches and trees. Otherwise raise it of at least 1 m over the hindrance. The chimney cap must exceed the ridge of the roof of at least 1 m.

Der Schornstein muss keine Hindernisse innerhalb 10m von Mauern, Schichten und Bäumen. Anderenfalls der Schornstein mindestens 1m über das Hindernis stellen. Der Schornstein muss den Firstträger um mindestens 1m überschreiten.

La tête de cheminée ne doit pas avoir d'obstacles dans les 10 m depuis les murs, nappes et arbres. Au cas contraire il faut soulever la tête de cheminée d'au moins 1 m au dessus de l'obstacle. La tête de cheminée doit surmonter la ligne de faîte du toit d'au moins 1 m.

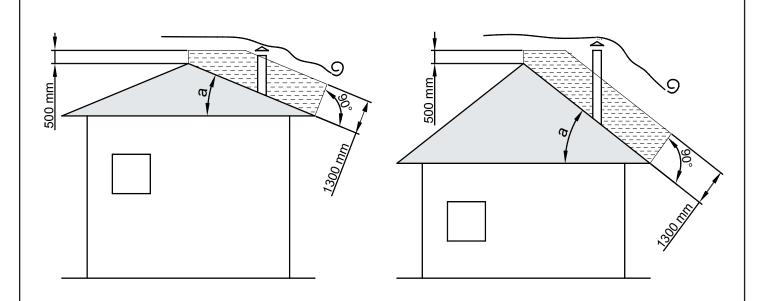
El sombrerete no debe encontrar obstáculos en un radio de 10 m de muros, faldones y árboles. De lo contrario elévelo por lo menos de 1 metro por encima del obstáculo. El sombrerete debe superar la cumbrera del techo de por lo menos 1 m.

COMIGNOLI DISTANZE E POSIZIONAMENTO UNI 10683

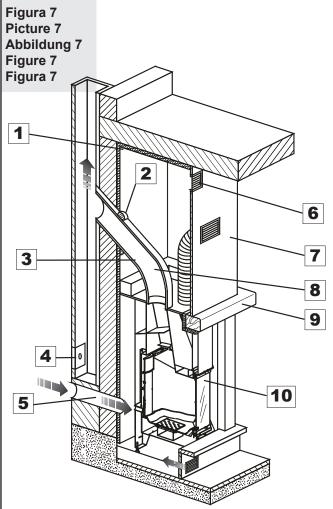
CHIMNEY CAPS - DISTANCES AND POSITIONING UNI 10683 SCHORNSTEINE ABSTÄNDE UND STELLUNG UNI 10683 TETES DE CHEMINEE ET POSITIONNEMENT UNI 10683 SOMBRERETES DISTANCIAS Y UBICACIÓN UNI 10683

Inclinazione del tetto
Inclination of the roof
Dachneigung
Inclinaison du toit
Inclinación del techo

a >10°





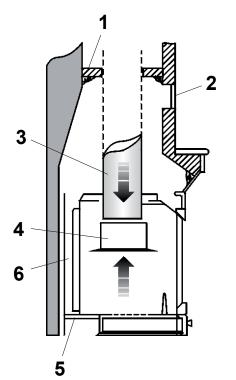


* COME DA DISPOSIZIONI REGIONALI ESISTENTI - ACCORDING TO THE REGIONAL REGULATIONS - NACH DER REGIONALEN REGELUNGEN - SELON L'ORDONNANCE RÉGIONALE - CONFORME CON LA NORMATIVA LOCAL

1*	Isolante / Insulating material / Isolator / Isolante / Aislamiento					
2	Sigillare / Seal / Versiegeln / Sceller / Sellar					
3	Rivestimento isolante provvisto di foglio di alluminio esterno / Insulating coating with external aluminum sheet / Isolierverkleidung mit Außenaluminiumblatt / Revêtement isolant avec feuille d'aluminium externe / Revestimiento aislante provisto de hoja de aluminio exterior					
4	Sportello per pulizia / Door for cleaning / Reinigungstür / Porte pour nettoyage / Puerta para limpieza					
5	Presa aria esterna / External air intake / Außenlufteinlass Prise air extérieure / Toma de aire exterior					
6	Griglia sfiato calore / Heat drain grating / Wärmeentlüftungsgitter / Grille évacuation chaleur / Rejilla venteo calor					
7	Controcappa ignifuga / Fire-retardant counter-hood / Feuerfester Estrichunterbau / Contre-hotte ignifuge / Revestimiento interior de la campana ignifugo					
8	Inclinazione massima 45° / Maximum inclination 45° / Maximalneigung 45° / Inclinaison maximale 45° / Inclinación máxima 45°					
9*	Schermare le parti in legno con materiale isolante / Shield wooden parts with insulating material / Die Holzteile mit Isoliermaterial abschirmen / Protéger les parties en bois avec matériau isolant / Proteger las partes de madera con material aislante					
10	Tutte le distanze minime di sicurezza (cm) sono indicate sulla targhetta tecnica del prodotto e NON si deve scendere al di sotto dei valori indicati (Vedi DICHIARAZIONE DI PRESTAZIONE) / All the minimum safety distances (cm) are shown on the product data plate and lower values must not be used (See DECLARATION OF PERFORMANCE) / Alle Sicherheitsabstände (cm) sind auf der Typenschild des Produktes gezeigt und dürfen nicht unter der angegebenen Werte liegen (siehe LEISTUNGSERKLÄRUNG) / Toutes les distances minimales de (cm) sécurité sont indiquées dans l'étiquette du produit et on il NE FAUT PAS descendre au-dessous des valeurs indiqués (voir DÉCLARATION DE PERFORMANCE) / Todas las distancias mínimas de seguridad (cm) se muestran en la placa técnica del producto y NO deben ser empleadas medidas inferiores a estas (véase DECLARACIÓN DE PRESTACIÓN).					

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INSERTI



	Chiusura del condotto esistente con lamiera, mattoni, pannelli di lana di roccia o materiali ignifughi / Closure of the existing duct with sheet metal, bricks, mineral wool panels or fire resistant materials	
	/ Verriegelung der vorhandenen Rohrleitung mit Blech, Backsteinen, Gesteinswolletafeln oder	
1*	feuerfeste Materialen / Fermeture du conduit existant avec tôle, briques, panneaux de laine de	
	roche ou matériaux ignifuges / Cierre del conducto existente con chapa, ladrillos, paneles de lana	
	de roca o materiales ignífugos	

2 Griglia / Grating / Gitter / Grille / Rejilla

3 Condotto di collegamento / Connection duct / Verbindungsrohrleitung / Conduit de connexion / Conducto de conexión

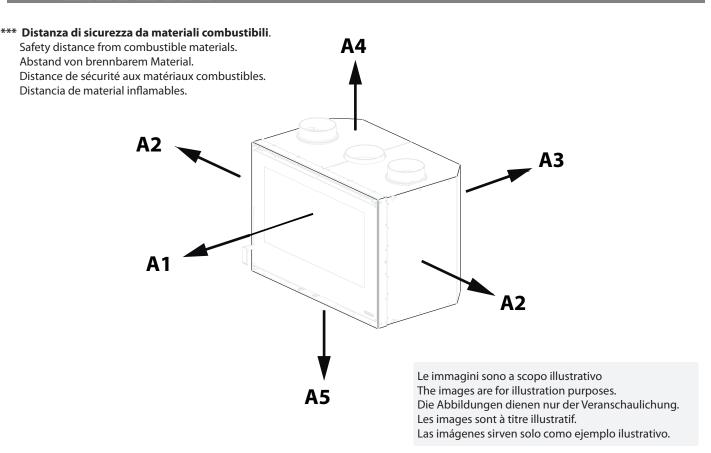
4** Condotto / Duct / Rohrleitung / Conduit / Conducto

5 Griglia di entrata aria / Air intake grating / Lufteinlassgitter / Grille d'entrée air / Rejilla de entrada de aire

Tutte le distanze minime di sicurezza (cm) sono indicate sulla targhetta tecnica del prodotto e NON si deve scendere al di sotto dei valori indicati (Vedi **DICHIARAZIONE DI PRESTAZIONE**) / All the minimum safety distances (cm) are shown on the product data plate and lower values must not be used (See DECLARATION OF PERFORMANCE) / Alle Sicherheitsabstände (cm) sind auf der Typenschild des Produktes gezeigt und dürfen nicht unter der angegebenen Werte liegen (siehe LEISTUNGSERKLÄRUNG) / Toutes les distances minimales de (cm) sécurité sont indiquées dans l'étiquette du produit et on il NE FAUT PAS descendre au-dessous des valeurs indiqués (voir DÉCLARATION DE PERFORMANCE) / Todas las distancias mínimas de seguridad (cm) se muestran en la placa técnica del producto y NO deben ser empleadas medidas inferiores a estas (véase DECLARACIÓN DE PRESTACIÓN)

** NO - Inserto 80 PRS Crystal





cm	A1	A2	А3	A4	A5
INSERTO 50 Crystal	80	6	6	-	-
INSERTO 50V Crystal BII	80	5	5	-	-
INSERTO 50V p30 Crystal	80	5	5	-	-
INSERTO 70 Crystal	80	6	6	-	-
INSERTO 80 Crystal EVO 2.0	120	30	30	-	-
INSERTO 80 Crystal PRS	120	30	30	-	-
INSERTO 100 Crystal	80	8	8	-	-

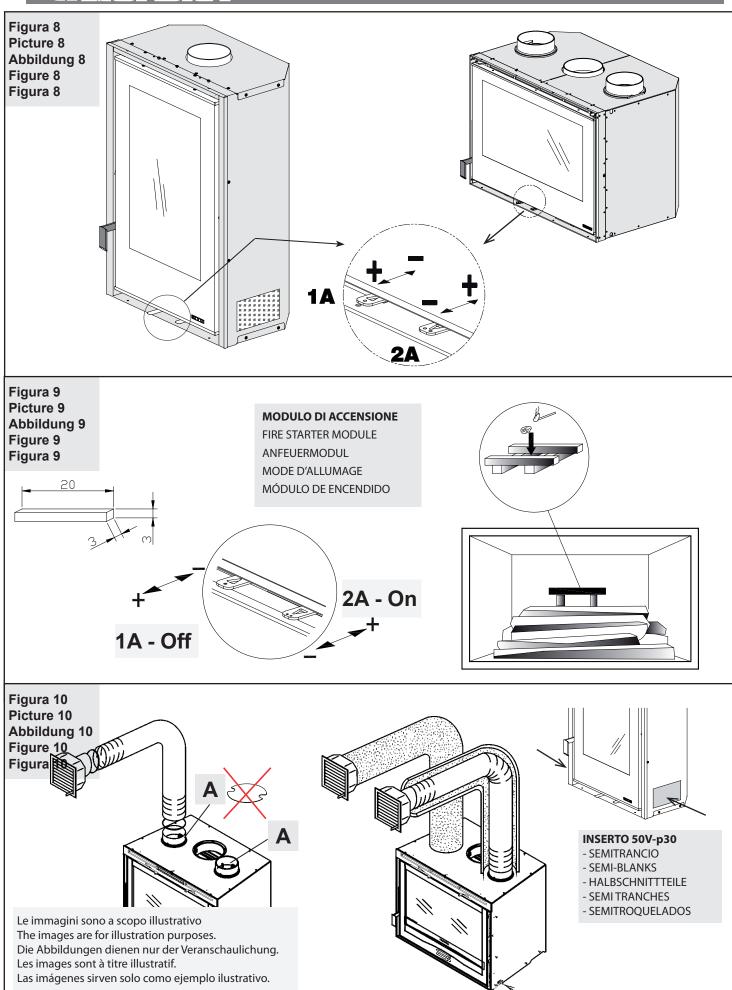
Tutte le distanze minime di sicurezza (cm) sono indicate sulla targhetta tecnica del prodotto e NON si deve scendere al di sotto dei valori indicati (Vedi DICHIARAZIONE DI PRESTAZIONE).

All the minimum safety distances (cm) are shown on the product data plate and lower values must not be used (See DECLARATION OF PERFORMANCE).

Alle Sicherheitsabstände (cm) sind auf der Typenschild des Produktes gezeigt und dürfen nicht unter der angegebenen Werte liegen (siehe LEISTUNGSERKLÄRUNG).

Toutes les distances minimales de (cm) sécurité sont indiquées dans l'étiquette du produit et on il NE FAUT PAS descendre au-dessous des valeurs indiqués (voir DÉCLARATION DE PERFORMANCE).

Todas las distancias mínimas de seguridad (cm) se muestran en la placa técnica del producto y NO deben ser empleadas medidas inferiores a estas (véase DECLARACIÓN DE PRESTACIÓN).



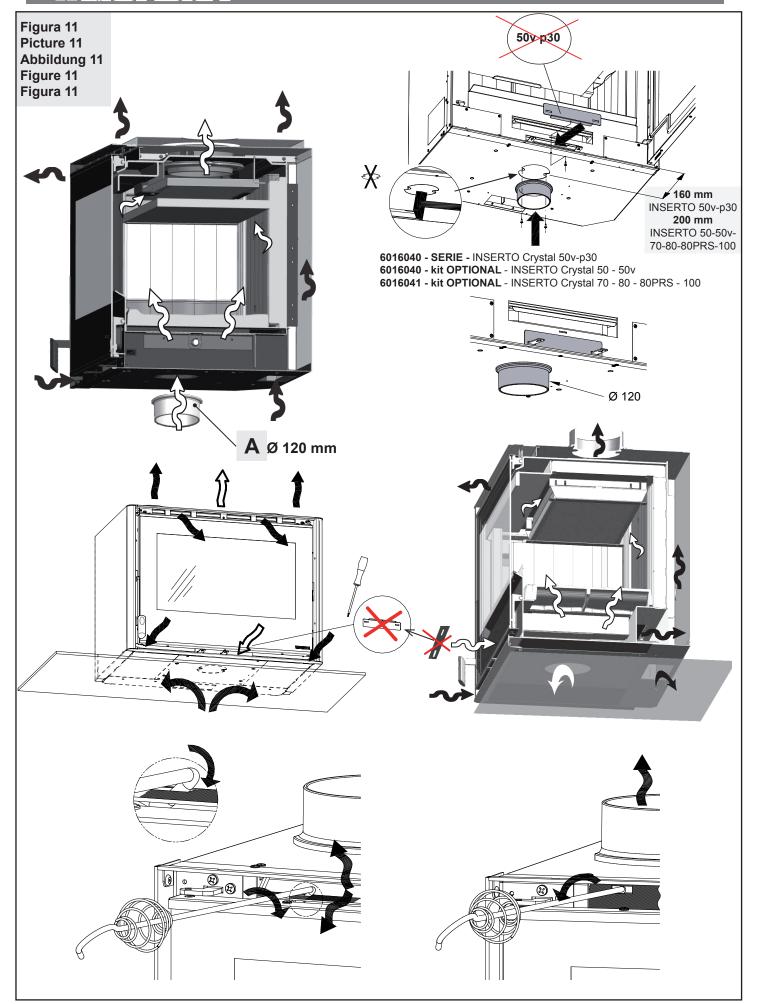


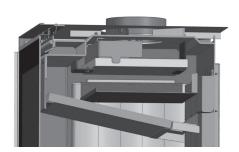


Figura 12 Picture 12 Abbildung 12 Figure 12 Figura 12

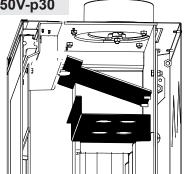
DEFLETTORE FUMI

SMOKE DEFLECTOR
RAUCHUMLENKPLATTE
DEFLECTEUR FUMEES
DEFLECTORES DE HUMO

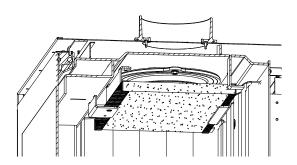
INSERTO 50V BII



INSERTO 50V-p30



INSERTO 50 - 70 - 100



INSERTO 80 EVO 2.0 - 80 PRS

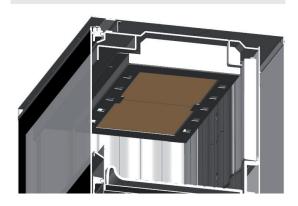
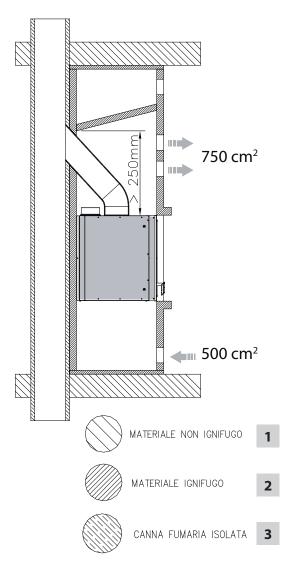




Figura 13 Picture 13 Abbildung 13 Figure 13 Figura 13

INSERTO CRYSTAL 50 BII - INSERTO CRYSTAL 50V P30 - INSERTO 50-70-100 CRYSTAL



- Tutte le distanze minime di sicurezza (cm) sono indicate sulla targhetta tecnica del prodotto e NON si deve scendere al di sotto dei valori indicati (Vedi **DICHIARAZIONE DI PRESTAZIONE**)
- All the minimum safety distances (cm) are shown on the product data plate and lower values must not be used (See DECLARATION OF PERFORMANCE)
- Alle Sicherheitsabstände (cm) sind auf der Typenschild des Produktes gezeigt und dürfen nicht unter der angegebenen Werte liegen (siehe LEISTUNGSERKLÄRUNG)
- -Toutes les distances minimales de (cm) sécurité sont indiquées dans l'étiquette du produit et on il NE FAUT PAS descendre au-dessous des valeurs indiqués (voir DÉCLARATION DE PERFORMANCE)
- Todas las distancias mínimas de seguridad (cm) se muestran en la placa técnica del producto y NO deben ser empleadas medidas inferiores a estas (véase DECLARACIÓN DE PRESTACIÓN).

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1	NON-fireproof material	NICHT feuerfestes Material	Matériau NON-ignifuge	Material NO incombustible
2	2 Fireproof material Feuerfestes Material		Matériau ignifuge	Material ignífugo
3	Smoke with thermal insulation	Rauch mit Wärmedämmung	Fumée avec isolation thermique	Humo con aislamiento térmico





INSERTO 80 CRYSTAL EVO 2.0 - INSERTO 80 CRYSTAL PRS

750 cm² min. 500

750 cm² min. 570

INSERTO 800 PRS

60

500 cm²

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750 cm² min. 500

INSERTO 800 PRS

60

1200

500 cm²

WATERIAL NON STATE OF THE PRIVATE OF T

1	NON-fireproof material	NICHT feuerfestes Material		
2	Fireproof material	Feuerfestes Material	Matériau ignifuge	Material ignífugo
3	Smoke with thermal insulation	Rauch mit Wärmedämmung	Fumée avec isolation thermique	Humo con aislamiento térmico



MATERIALE NON IGNIFUGO

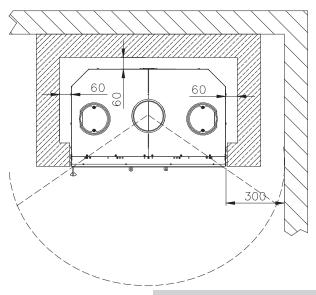
2

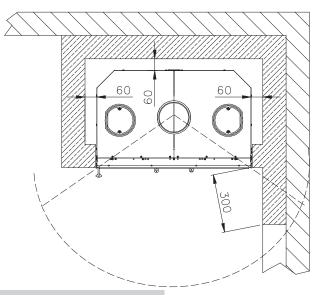


MATERIALE IGNIFUGO

3



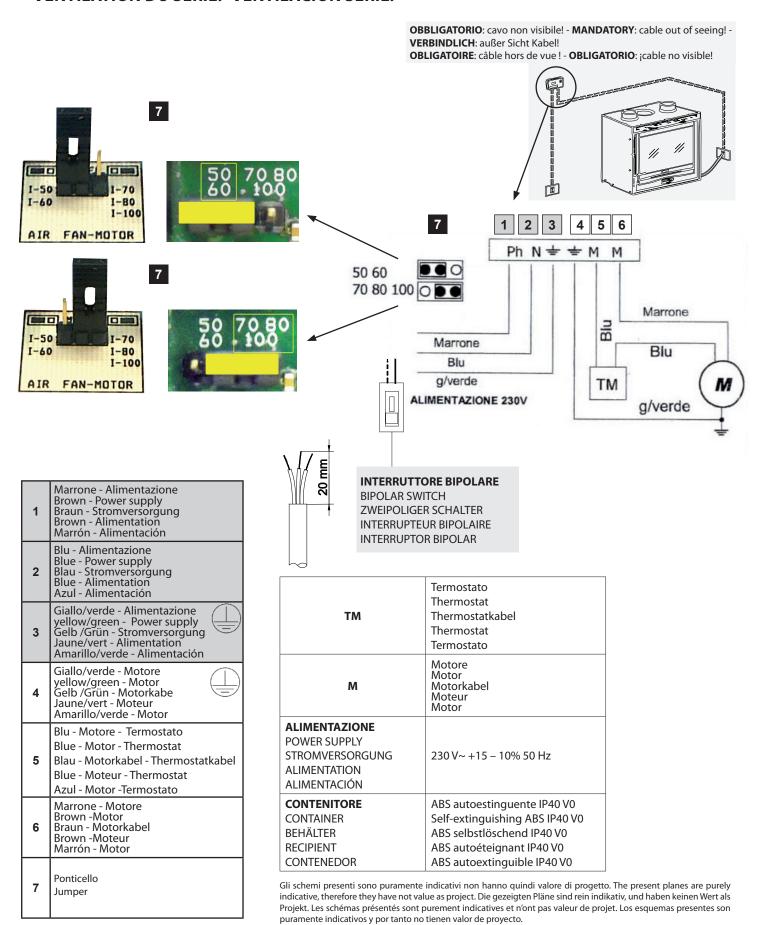




INSERTO 80 CRYSTAL EVO 2.0 - INSERTO 80 CRYSTAL PRS



VENTILAZIONE DI SERIE. SEIRES VENTILATION. LÜFTUNG – SCHON DABEI. VENTILATION DU SERIE. VENTILACIÓN SERIE.





DATI TECNICI. TECHNICAL DATA SHEET. TECHNISCHE PROTOKOLLE. FICHA TÉCNICA.

FIGURE TECHNICAL DA		50V			80	80	
FICHE TECHNIQUE.	50 Crystal	Crystal Bll	50V p30 Crystal	70 Crystal	Crystal Evo 2.0	Crystal PRS	100 Crystal
Riferimenti Normative Normative documents Normensetzende Dokumente Documents Normatifs Documentos normativos	EN 13229	EN 13229	EN 13229	EN 13229	EN 13229	EN 13229	EN 13229
Potenza termica nominale (kW) Rated thermal power (kW) Nennwärmeleistung (kW) Puissance thermique nominale (kW) Potencia térmica nominal (kW)	6	8,3	6	9	7,4	8,3	9,5
Consumo orario (kg/h) Hourly consumption (kg/h) Verbrauch pro Stunde (kg/h) Consommation horaire (kg/h) Consumo horario (kg/h)	1,8	2,4	1,7	2,7	2,1	2,2	2,8
Rendimento (%) Yield (%) Wirkungsgrad (%) Rendement (%) Rendimiento (%)	78,3	81	82	78,2	83,9	87,4	78,2
m³ riscaldabili (30 kcal/h x m³) Heatable m³ (30 kcal/h x m³) Heizungsvermögen m³ (30 kcal/h x m³) m³ que l'on peut chauffer (30 kcal/h x m³) m³ con posibilidad de calentamiento (30 kcal/h x m³)	172	237	172	258	212	237	272
Ventilazione regolabile Adjustable Ventilation Lüftung einstellbar Ventilation réglable Ventilación regulable	SERIE SERIES Schon dabei	SERIE SERIES Schon dabei	NO	SERIE SERIES Schon dabei	SERIE SERIES Schon dabei	SERIE SERIES Schon dabei	SERIE SERIES Schon dabei
KIT ventilazione (1318000) Ventilation KIT (1318000) Kit Gebläse (1318000) Kit ventilation (1318000) Kit Ventilación (1318000)	NO	NO	NO	OPZIONALE OPTIONAL EXTRA OPTIONNEL OPCIONAL	OPZIONALE OPTIONAL EXTRA OPTIONNEL OPCIONAL	OPZIONALE OPTIONAL EXTRA OPTIONNEL OPCIONAL	OPZIONALE OPTIONAL EXTRA OPTIONNEL OPCIONAL
Depressione al camino in Pa (mmH ₂ O) Depression at the stack in Pa (mmH ₂ O) Unterdruck am Schornstein in Pa (mmH ₂ O) Dépression de la cheminée in Pa (mmH ₂ O) Depresión en la chimenea Pa (mmH ₂ O)	12 (1,2)	12 (1,2)	12 (1,2)	12 (1,2)	10 (1,0)	10 (1,0)	12 (1,2)
Uscita fumi Ø (cm) Smoke output Ø (cm) Abgasaustritt Ø (cm) Sortie fumées Ø (cm) Salida de humos Ø (cm)	13	15	13	16	16	16	16
Canna fumaria: Altezza ≥ (m); Flue: Height ≥ (m); Schornsteinrohr: Höhe ≥ (m); Conduit de fumée: Hauteur -≥ (m); Humero: Altura ≥ (m) Dimensioni / Dimensions / Abmessungen / Dimensions / Dimensiones (cm)	(*) 6 20x20 ÷ Ø 20	(*) 6 20x20 ÷ Ø 20	(*) 6 20x20 ÷ Ø 20	(*) 6 20x20 ÷ Ø 20	(*) 6 20x20 ÷ Ø 20	(*) 6 20x20 ÷ Ø 20	(*) 4 25x25 ÷ Ø 25
Emissione gas di scarico in g/s Exhaust gas emission in g/s Abgasemission in g/s Émission de gaz d'échappement en g/s Emisión de gases de descarga en g/s	7	5,9	9,5	8,9	5,6	5,6	9,3
Temperatura gas di scarico nel mezzo in °C Exhaust gas temperature in °C Abgastemperatur im Medium in °C Température du gaz d'échappement en °C Temperatura de gases de descarga en °C	254	344	268	293	240	200	288



	50 Crystal	50V Crystal BII	50V p30 Crystal	70 Crystal	80 Crystal Evo 2.0	80 Crystal PRS	100 Crystal		
Assorbimento elettrico (W) Electric consumption (W) Stromaufnahme (W) Absorption électrique (W) Consumo eléctrico (W)	30	30	30	60	40	40	60		
Aria PRIMARIA regolabile Adjustable PRIMARY air Einstellbare PRIMÄRLUFT Air PRIMAIRE réglable Aire PRIMARIO regulable	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM		
Aria SECONDARIA regolabile Adjustable SECONDARY air Einstellbare SEKUNDÄRLUFT Air SECONDAIRE réglable Aire SECUNDARIO regulable	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM		
Aria TERZIARIA PRETARATA PRE-ADJUSTED TERTIARY Air VORAUSTARIERTE TERTIÄRLUFT Air TERTIAIRE PRÉ CALIBRE Aire terciario PRECALIBRADA	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM	SI YES JA OUI SIM	NO		
Certificazione Certification Zertifizierung Certification Certificación	EN VKF	EN 15a B-VG VKF 2° BImSchV	EN 15a B-VG VKF 2° BImSchV	EN VKF 2° BlmSchV	EN 15a B-VG 2° BlmSchV	EN 15a B-VG 2° BlmSchV	EN VKF 2° BlmSchV		
Peso approssimativo (kg) Approximate weight (kg) Annährendes Gewicht (kg) Poids approximatif (kg) Peso aproximado (kg)	90	115	89	124	130	150	156		
Misure esterne (mm); External measures (mm); Außenabmessungen (mm); Mesures externes (mm); Medidas exteriores (mm) Larghezza / Width / Breite / Largeur / Ancho Altezza / Height / Höhe / Hauteur / Alto Profondità / Depth / Tiefe / Profondeur / Profundidad	500 555 500	500 800 500	555 800 302	700 555 500	800 555 500	800 893 500	1000 555 500		
Dimensioni bocca fuoco in mm (L x H) Hearth opening size in mm (W x H) Größe der Feuerraumöffnung in mm (B x H) Dimensions d'ouverture du foyer mm (L x H) Dimensiones de la apertura del fogón en mm (L x P)	335 x 245	335 x 347	330 x 380	540 x 245	635 x 245	635 x 245	835 x 245		
Dimensioni focolare in mm (L x H x P) Hearth size in mm (W x H x D) Größe des Feuerraum in mm (B x H x T) Dimensions du foyer en mm (L x H x P) Dimensiones del plano fogón en mm (LxHxP)	300 x 320 x 360	300 x 400 x 360	304 x 502 x 162	500 x 320 x 360	600 x 310 x 360	600 x 310 x 360	785 x 320 x 360		
Focolare Hearth Feuerraum Foyer Fogón	Ghisa / NORDIKER Cast-Iron / NORDIKER Gusseisen / NORDIKER Fonte / NORDIKER Hierro fundido / NORDIKER On inferiore a 6 m. Lyalori sono puramente indicativi. L'installazione deve essere comunque								

(*) Diametro 200 mm utilizzabile con canna fumaria non inferiore a 6 m. I valori sono puramente indicativi. L'installazione deve essere comunque dimensionata e verificata secondo il metodo generale di calcolo delle UNI EN13384-1 o altri metodi di comprovata efficienza.

(*) Diamètre de 200 mm utilisable avec conduit de fumée non inférieur à 6 m. Dans tous les cas, l'installation doit être dimensionnée et vérifiée conformément a la méthode générale de calcul de la norme UNI EN13384-1 ou selon d'autres méthodes dont l'efficience a été prouvée.

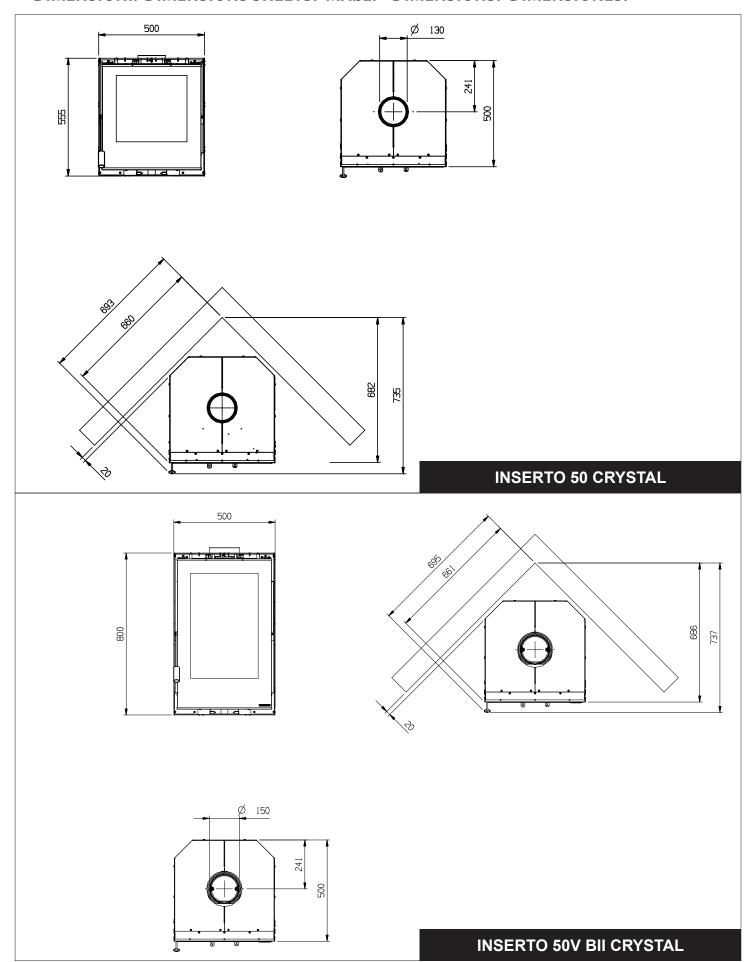
(*) Diámetro 200 mm utilizable con conducto de salida de humos no inferior 6 m. Los valores propuestos son indicativos. De cualquier manera la instalación se debe dimensionar y controlar según método general de calculo de la UNI EN13384-1 u otros métodos de eficiencia probada.

^{(*) 200} mm diameter can be used with flue of no less than 6 m. The proposed value are indicative. The installation must, in any case, be sized and verified according to the general calculation method in UNI EN13384-1 or by another method of proven efficiency.

^(*) Durchmesser 200 mm nutzbar mit Rauchabzug nicht unter 6 m. Die vorgeschlagenen Werte sind Richtwerte. Die Installation muss in jedem -fall in Übereinstimmung mit der generellen Berechnungsmethode nach UNI EN13384-1 oder anderen als wirkungsvoll erwiesenen Methoden bemessen und übergeprüft werden.

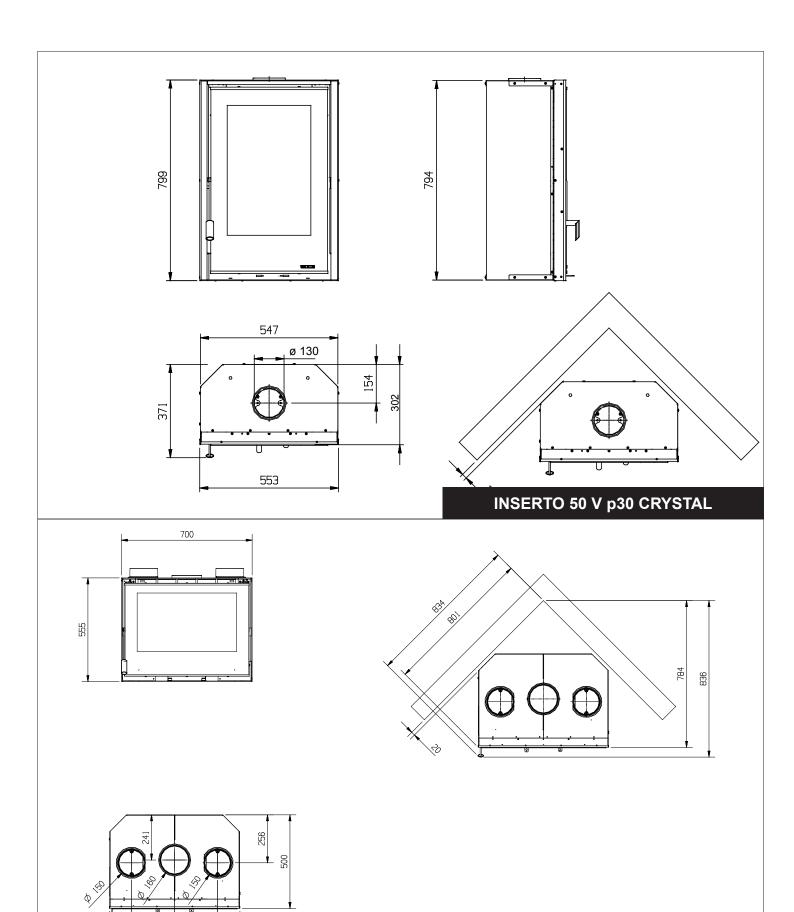


DIMENSIONI. DIMENSIONS SHEETS. MAßE. DIMENSIONS. DIMENSIONES.



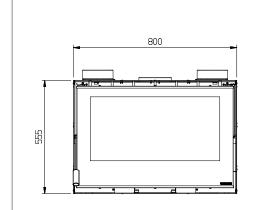


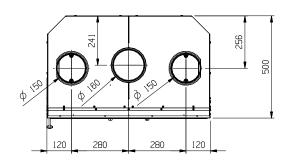
120

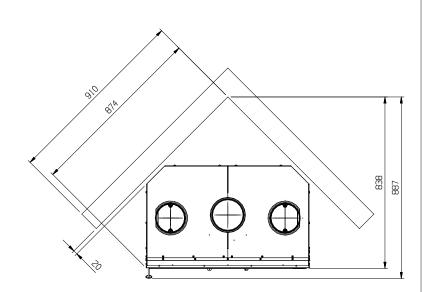


INSERTO 70 CRYSTAL

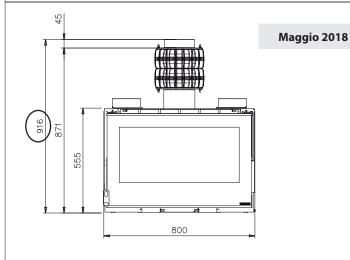


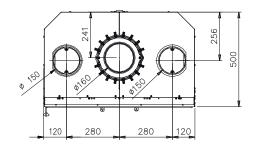


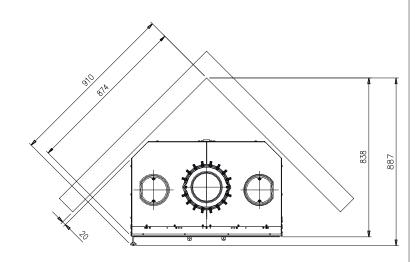




INSERTO 80 CRYSTAL EVO 2.0

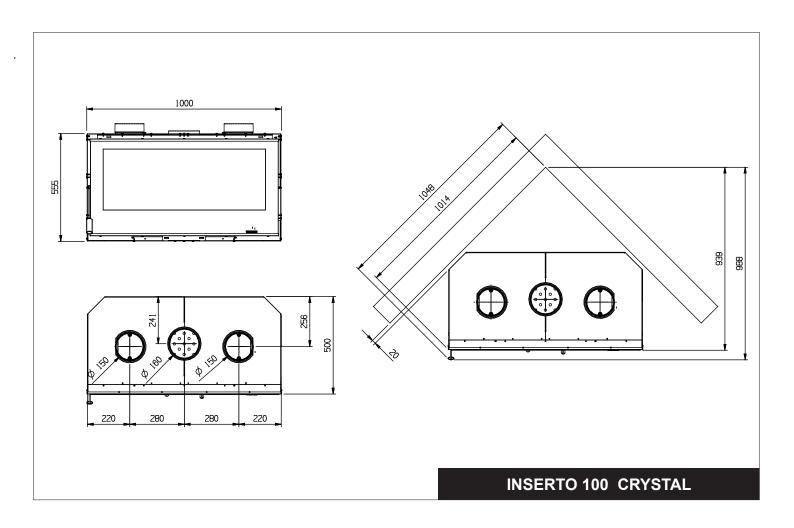






INSERTO 80 PRS CRYSTAL







Riscalda la vita.

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THE MANUFACTURER RESERVES THE RIGHT TO VARY THE CHARACTERISTICS AND THE DATA REPORTED IN THIS PAMPHLET AT ANY MOMENT AND WITHOUT NOTICE, IN ORDER TO IMPROVE ITS PRODUCTS.

THIS MANUAL, THEREFORE, CANNOT BE REGARDED AS A CONTRACT TOWARDS OTHER PARTIES.

LE FABRICANT SE RÉSERVE LE DROIT DE MODIFIER LES CARACTÉRISTIQUES ET LES DONNÉES REPORTÉES DANS CE MANUEL À TOUT MOMENT ET SANS PRÉAVIS, DANS LE BUT D'AMÉLIORER SES PRODUITS. PAR CONSÉQUENT, CE MANUEL NE PEUT PAS ÊTRE CONSIDÉRÉ COMME UN CONTRAT VIS-À-VIS DE TIERS.

DER HERSTELLER BEHÄLT SICH VOR, DIE IN DEN VORLIEGENDEN UNTERLAGEN WIEDERGEGEBENEN EIGENSCHAFTEN UND DATEN ZU JEDEM BELIEBIGEN ZEITPUNKT UND OHNE VORANKÜNDIGUNG ZU ÄNDERN, UM SEINE PRODUKTE ZU VERBESSERN. DIESE ANLEITUNG KANN DAHER NICHT ALS VERTRAG DRITTEN GEGENÜBER ANGESEHEN WERDEN.

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