LA NORDICA®

Riscalda la vita.

UK

MADE IN ITALY
design & production

WOOD PRODUCTS USER MANUAL
TERMOROSA DSA.16 CERAMICA
TERMOROSA DSA.16 PETRA

004300060 - Rev.000

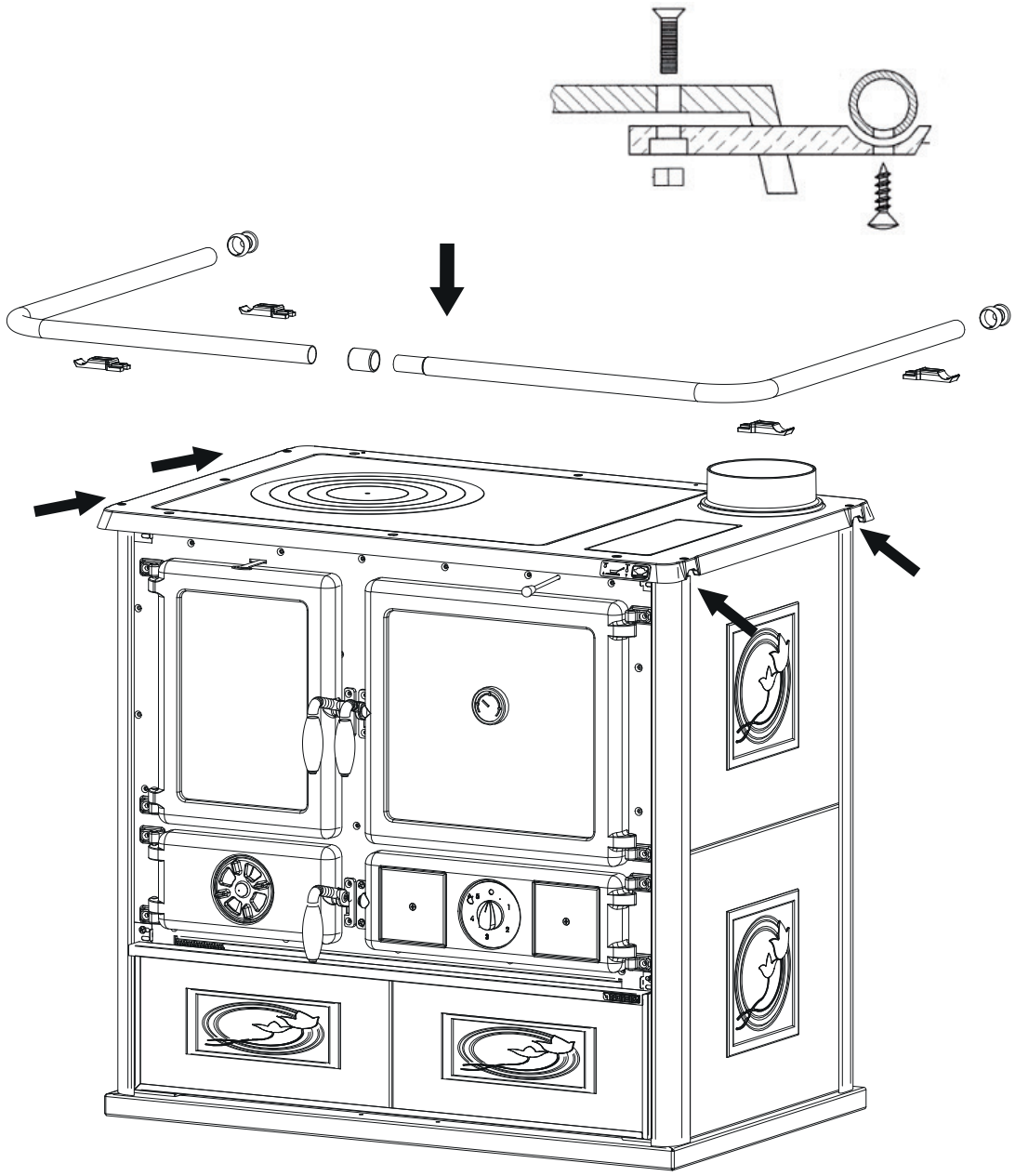
ATTENTION


SURFACES CAN BECOME VERY HOT!
ALWAYS USE THE SAFETY GLOVE!

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 (safety glove supplied). Make sure children are aware of the danger and keep them away from the stove during operation.

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



MANUFACTURER'S DECLARATION OF CONFORMITY

SUBJECT: ABSENCE OF ASBESTOS AND CADMIUM

IT IS HEREBY DECLARED THAT ALL APPLIANCES ARE ASSEMBLED USING MATERIALS THAT DO NOT CONTAIN ASBESTOS OR ASBESTOS DERIVATIVES AND THAT CADMIUM IS NOT PRESENT OR USED IN ANY FORM IN THE FILLER MATERIAL USED FOR WELDING, IN FULL COMPLIANCE WITH THE RELEVANT STANDARD.

GENERAL NOTICES

LA NORDICA S.p.A's LIABILITY IS LIMITED TO THE SUPPLY OF THE APPLIANCE.

THE INSTALLATION MUST BE CARRIED OUT IN COMPLIANCE WITH INDUSTRY BEST PRACTICES, IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN THESE INSTRUCTIONS AND PROFESSIONAL STANDARDS, BY QUALIFIED PERSONNEL ACTING ON BEHALF OF COMPANIES CAPABLE OF ASSUMING FULL RESPONSIBILITY FOR THE ENTIRE SYSTEM.
LA NORDICA S.p.A. IS NOT RESPONSIBLE FOR ANY UNAUTHORISED MODIFICATIONS TO THE PRODUCT, NOR FOR THE USE OF NON-ORIGINAL SPARE PARTS.

This appliance is not suitable for use by individuals (including children) with reduced physical, sensory or mental capabilities, or those lacking experience and knowledge, unless they are supervised and instructed in the use of the appliance by a responsible person ensuring their safety. Children must be supervised to ensure they do not play with the appliance (EN 60335-2-102 / 7.12).
IT IS MANDATORY TO COMPLY WITH NATIONAL AND EUROPEAN STANDARDS, AS WELL AS LOCAL BUILDING REGULATIONS AND FIRE SAFETY REGULATIONS.

DO NOT PLACE FOOD DIRECTLY ON THE PRODUCT SURFACES OR ON THE ACCESSORIES SUPPLIED: ALWAYS PLACE SUITABLE MATERIALS FOR CONTACT WITH FOOD BETWEEN THE SURFACES AND THE FOOD.

NO MODIFICATIONS TO THE APPLIANCE ARE PERMITTED. LA NORDICA S.P.A. DISCLAIMS ALL LIABILITY FOR ANY FAILURE TO OBSERVE THESE PRECAUTIONS.

THIS INSTRUCTION MANUAL FORMS AN INTEGRAL PART OF THE PRODUCT. ENSURE THAT IT REMAINS WITH THE APPLIANCE AT ALL TIMES, EVEN IN THE EVENT OF SALE, TRANSFER TO ANOTHER OWNER OR USER, OR RELOCATION TO ANOTHER PREMISES. IF IT IS LOST OR DAMAGED, REQUEST A REPLACEMENT FROM YOUR LOCAL TECHNICAL SERVICE PROVIDER. THIS PRODUCT MUST BE USED ONLY FOR ITS EXPRESSLY INTENDED PURPOSE. THE MANUFACTURER ACCEPTS NO CONTRACTUAL OR EXTRA-CONTRACTUAL LIABILITY FOR DAMAGES TO PERSONS, ANIMALS, OR PROPERTY CAUSED BY INCORRECT INSTALLATION, IMPROPER ADJUSTMENT OR MAINTENANCE, AND MISUSE OF THE APPLIANCE.

INSTALLATION MUST BE CARRIED OUT BY QUALIFIED AND AUTHORISED PERSONNEL, WHO WILL ASSUME FULL RESPONSIBILITY FOR THE FINAL INSTALLATION AND PROPER OPERATION OF THE PRODUCT. ALL NATIONAL, REGIONAL, PROVINCIAL AND LOCAL LAWS AND REGULATIONS IN THE COUNTRY WHERE THE APPLIANCE IS INSTALLED, AS WELL AS THE INSTRUCTIONS IN THIS MANUAL, MUST BE CONSIDERED.
THE USE OF THE APPLIANCE MUST COMPLY WITH ALL LOCAL, REGIONAL, NATIONAL AND EUROPEAN REGULATIONS.
THE MANUFACTURER ACCEPTS NO LIABILITY IF THESE PRECAUTIONS ARE NOT FOLLOWED.

AFTER UNPACKING, CHECK FOR ANY DAMAGE OR MISSING PARTS. IF THE APPLIANCE DOES NOT MEET EXPECTATIONS, CONTACT THE RETAILER WHERE IT WAS PURCHASED.
ALL ELECTRICAL COMPONENTS (WHERE PRESENT) COMPRISING THE PRODUCT, AND WHICH ARE ESSENTIAL FOR ITS PROPER FUNCTIONING, MUST ONLY BE REPLACED WITH ORIGINAL SPARE PARTS BY AN AUTHORISED TECHNICAL SERVICE CENTRE.

SAFETY

- **THIS APPLIANCE MAY BE USED BY CHILDREN AGED 8 AND ABOVE, AS WELL AS INDIVIDUALS WITH REDUCED PHYSICAL, SENSORY OR MENTAL CAPABILITIES, OR THOSE WITHOUT EXPERIENCE OR KNOWLEDGE, PROVIDED THEY ARE SUPERVISED OR HAVE RECEIVED INSTRUCTIONS ON THE SAFE USE OF THE APPLIANCE AND**

UNDERSTAND THE POTENTIAL HAZARDS. CHILDREN MUST BE SUPERVISED TO ENSURE THEY DO NOT PLAY WITH THE APPLIANCE. CLEANING AND MAINTENANCE INTENDED TO BE PERFORMED BY THE USER MUST NOT BE CARRIED OUT BY CHILDREN WITHOUT SUPERVISION.

- DO NOT TOUCH THE HEATER WITH BARE FEET OR WITH WET OR DAMP BODY PARTS.
- MODIFICATIONS TO THE APPLIANCE ARE STRICTLY PROHIBITED.
- DO NOT PULL, DISCONNECT OR TWIST THE ELECTRICAL CABLES PROTRUDING FROM THE APPLIANCE (IF PRESENT), EVEN WHEN THE UNIT IS UNPLUGGED.
- ENSURE THAT THE POWER CORD (IF PRESENT) IS POSITIONED SO THAT IT DOES NOT COME INTO CONTACT WITH HOT PARTS OF THE APPLIANCE.
- THE POWER PLUG MUST REMAIN ACCESSIBLE AFTER INSTALLATION.
- DO NOT CLOSE OR REDUCE THE SIZE OF THE AIRING VENTS IN THE INSTALLATION SITE, AS THESE ARE ESSENTIAL FOR PROPER COMBUSTION.
- DO NOT LEAVE PACKAGING ITEMS WITHIN REACH OF CHILDREN OR UNASSISTED INCAPACITATED PERSONS.
- THE COMBUSTION CHAMBER DOOR MUST ALWAYS REMAIN CLOSED DURING OPERATION AND SHOULD ONLY BE OPENED FOR FUEL LOADING, IGNITION AND CLEANING.
- WHEN THE APPLIANCE IS IN OPERATION, ALL EXTERNAL SURFACES BECOME HOT, THEREFORE, EXERCISE CAUTION
- BEFORE RESTARTING THE APPLIANCE AFTER A LONG PERIOD OF NON-USE, CHECK FOR OBSTRUCTIONS.
- IN THE EVENT OF A FLUE FIRE, USE APPROPRIATE FIRE SUPPRESSION METHODS OR CALL THE FIRE BRIGADE.
- THIS APPLIANCE MUST NOT BE USED AS A WASTE INCINERATOR
- NEVER USE PETROL, KEROSENE, LIGHTER FLUID, ETHANOL OR SIMILAR LIQUIDS TO START OR RESTART THE HEATER.
- MAJOLICA TILES (WHERE PRESENT) ARE HIGH-QUALITY HANDCRAFTED PRODUCTS AND MAY THEREFORE EXHIBIT MINOR SPECKLING, CRAZING OR SLIGHT COLOUR IMPERFECTIONS. THESE CHARACTERISTICS ATTEST TO ITS HIGH-QUALITY NATURE. DUE TO THE DIFFERENT EXPANSION COEFFICIENTS OF ENAMEL AND MAJOLICA, MICRO-CRACKS (CRAZING) MAY APPEAR, PROVING THEIR AUTHENTICITY. TO CLEAN MAJOLICA SURFACES, USE A SOFT, DRY CLOTH. IF ANY CLEANING AGENTS OR LIQUIDS ARE USED, THEY MAY PENETRATE THE MICRO-CRACKS, MAKING THEM MORE VISIBLE.

FIRE SAFETY

MINIMUM CLEARANCES

Installation next to combustible or heat-sensitive materials is permitted, **provided that suitable safety distances are maintained, as** specified in the CEMI (CE Marking Information), the Declaration of Performance (DoP) and **the label at the beginning of the manual (page 2).**

ALL NATIONAL, REGIONAL, PROVINCIAL AND LOCAL LAWS AND REGULATIONS IN THE COUNTRY WHERE THE APPLIANCE IS INSTALLED, AS WELL AS THE INSTRUCTIONS IN THIS MANUAL, MUST BE CONSIDERED.

DURING INSTALLATION, THE FOLLOWING SAFETY MEASURES MUST BE OBSERVED:

To ensure adequate thermal insulation, maintain the minimum safety distance at the rear ($\mathbf{d_R}$) and on both sides ($\mathbf{d_S}$) from flammable or heat-sensitive materials (e.g. furniture, wooden cladding, fabrics, etc.). **THESE DISTANCES MUST NOT FALL BELOW THE SPECIFIED VALUES;**

In front of the firebox door, within its radiation area, there must be no combustible or heat-sensitive objects or construction materials at a distance of less than $\mathbf{d_P}$. This distance may be reduced to 400 mm if a rear-ventilated, heat-resistant protective screen is installed in front of the entire surface to be protected;

IF THE PRODUCT IS INSTALLED ON A FLAMMABLE FLOOR (such as carpet, parquet, cork, etc.)**, THE FLOOR MUST BE PROTECTED WITH A NON-COMBUSTIBLE COVERING,** such as ceramic, stone, glass or steel, etc**.** The non-combustible protective material must: cover the area beneath the appliance and extend forward by at least the distance specified as $\mathbf{d_F}$; sideward by at least the distance specified as $\mathbf{d_S}$; and rearward by at least the distance specified as $\mathbf{d_R}$. These distances ensure effective and safe protection;

ABOVE THE PRODUCT, within the distance specified as $\mathbf{d_C}$, THERE MUST BE NO FLAMMABLE MATERIALS (e.g. furniture, overhead cabinets);

IF THE PRODUCT IS INSTALLED IN DIRECT CONTACT WITH A WALL MADE OF FLAMMABLE MATERIAL, THE AFFECTED SECTION OF THE WALL MUST BE PROTECTED WITH A LAYER OF NON-FLAMMABLE MATERIAL, such as ceramic, stone, glass or steel etc. The protection must cover the back part of the product and extend to the sides by at least the distance indicated as $\mathbf{d_S}$ and on the top by at least the distance indicated as $\mathbf{d_C}$;

For non-flammable materials, a minimum side and rear clearance must be maintained, as indicated by the distance marked $\mathbf{d_{non}}$.

THE PRODUCT MUST OPERATE EXCLUSIVELY WITH THE ASH DRAWER INSERTED. THE SOLID COMBUSTION RESIDUE (ASHES) MUST BE COLLECTED IN AN AIRTIGHT, FIRE-RESISTANT CONTAINER. THE PRODUCT MUST NEVER BE IGNITED IN THE PRESENCE OF GASEOUS EMISSIONS OR VAPOURS (FOR EXAMPLE, LINOLEUM GLUE, PETROL, ETC.). DO NOT STORE FLAMMABLE MATERIALS NEAR THE PRODUCT.

DURING COMBUSTION, THERMAL ENERGY IS RELEASED, CAUSING SIGNIFICANT HEATING OF THE SURFACES, DOORS, HANDLES, CONTROLS, GLASS, FLUE PIPE AND POTENTIALLY THE FRONT SECTION OF THE APPLIANCE. AVOID CONTACT WITH THESE COMPONENTS WITHOUT SUITABLE PROTECTIVE CLOTHING OR ACCESSORIES (HEAT-RESISTANT GLOVES, CONTROL DEVICES).
ENSURE THAT CHILDREN ARE AWARE OF THESE DANGERS AND KEEP THEM AWAY FROM THE FIREBOX DURING ITS OPERATION.

WHEN USING INCORRECT OR OVERLY MOIST FUEL, TAR DEPOSITS (CREOSOTE) CAN FORM INSIDE THE FLUE, INCREASING THE RISK OF FIRE.

IN CASE OF FAULTS

The steps to follow to safely switch off the appliance in the event of a malfunction are:

Broken glass door	Discontinue use of the product and contact the authorised service centre
Overheating of certain parts of the appliance or the flue pipe	Immediately stop loading the firewood, do not open the door, close the air intake dampers until the fire extinguishes, contact the authorised service centre in case of repeated overheating.

Broken internal baffles	Discontinue use of the product and contact the authorised service centre
Weak and/or smothered flame	Check the seals and ensure the firewood is not too damp, contact the authorised service centre
In case of adverse weather conditions	Monitor the combustion process
Smoke escaping when the door is opened	Check the pressure difference between the rooms where the heater is installed and the outside; the value must always be ≥ -4 Pa

FIRST-AID MEASURES

IF A FIRE OCCURS IN THE CONNECTION OR FLUE :

Close the loading door and the ash drawer.
Close the combustion air dampers
Extinguish the fire using carbon dioxide (CO_2 powder) extinguishers
Immediately call the fire brigade

DO NOT EXTINGUISH FIRE WITH WATER JETS.
WHEN THE FLUE STOPS BURNING, IT MUST BE INSPECTED BY A SPECIALIST TO IDENTIFY ANY CRACKS OR LEAKAGE POINTS.

INSTALLATION REGULATIONS

THE INSTALLATION OF THE PRODUCT AND ITS AUXILIARY EQUIPMENT RELATED TO THE HEATING SYSTEM, MUST COMPLY WITH ALL CURRENT STANDARDS AND REGULATIONS, AS WELL AS LEGAL REQUIREMENTS.

THE INSTALLATION, SYSTEM CONNECTIONS, COMMISSIONING AND OPERATIONAL TESTING MUST BE CARRIED OUT IN COMPLIANCE WITH BEST PRACTICES BY PROFESSIONAL, QUALIFIED PERSONNEL, ENSURING FULL ADHERENCE TO NATIONAL, REGIONAL, PROVINCIAL AND MUNICIPAL REGULATIONS IN THE COUNTRY WHERE THE APPLIANCE IS INSTALLED, AS WELL AS THESE INSTRUCTIONS.

THE INSTALLATION MUST BE CARRIED OUT BY AUTHORISED PERSONNEL, WHO MUST ISSUE THE PURCHASER WITH A DECLARATION OF CONFORMITY FOR THE SYSTEM, AND ASSUME FULL RESPONSIBILITY FOR THE FINAL INSTALLATION AND THE PROPER FUNCTIONING OF THE INSTALLED PRODUCT.

The Product is pre-assembled and ready for connection and must be connected via a duct to the pre-existing building flue. The duct should ideally be short, straight, horizontal or slightly inclined upwards. All connections must be airtight.

Before installation, perform the following checks:

- Hot air ducting (if present).
- Determine the type of ventilation (natural or forced – see chapter HOOD OR ADJACENT ROOM VENTILATION - if present)
- Check the load-bearing capacity of the structure to ensure it can support the weight of the appliance. If the load-bearing capacity is insufficient, appropriate measures must be taken. **LA NORDICA S.p.A.**'s responsibility is limited to supplying the appliance only (see technical data in the document "CE MARKING INFORMATION").
- Ensure that the floor can support the weight of the appliance; if made of flammable material, appropriate insulation must be provided.
- Check that the room where the appliance will be installed is suitably ventilated, paying attention in particular to airtight doors and windows (with sealing gaskets).
- AVOID INSTALLATION IN ROOMS WITH SHARED VENTILATION DUCTS, KITCHEN HOODS (WITH OR WITHOUT EXTRACTORS), TYPE B GAS APPLIANCES, HEAT PUMPS, OR ANY OTHER APPLIANCES WHOSE SIMULTANEOUS OPERATION COULD CREATE NEGATIVE PRESSURE IN THE ROOM (see **UNI 10683 Standard**). **Under all conditions, including the presence of extractor hoods and/or controlled forced ventilation systems, the pressure difference between the rooms where the heater is installed and the outside must always be ≥ -4 Pa (e.g. - 3 Pa is an acceptable value).**
- Check that the flue and pipes to which the appliance will be connected are suitable (see the technical data in the document "CE MARKING INFORMATION").
- The diameter of the opening for the connection to the chimney must at least correspond to the diameter of the flue pipe. The opening should be equipped with a wall connection for inserting the exhaust pipe and a rosette.
- The unused flue exhaust hole must be sealed with the appropriate cap (if present).
- The installation must allow access for cleaning and maintenance of both the product and the flue.
- Use a spirit level to ensure that the appliance is perfectly level, allowing for the proper movement of the door (if a sliding door is present). Adjust the levelling feet (if present).

LA NORDICA S.p.A. DISCLAIMS ALL LIABILITY FOR DAMAGE TO PROPERTY AND/OR PERSONS CAUSED BY THE INSTALLATION. FURTHERMORE, THE COMPANY IS NOT RESPONSIBLE FOR ANY UNAUTHORISED MODIFICATIONS TO THE PRODUCT, NOR FOR THE USE OF NON-ORIGINAL SPARE PARTS.

MAINTENANCE PROVISIONS

For non-routine maintenance of the product, it may be necessary to move it away from the adjacent walls. This operation must be carried out by a qualified technician, authorised to disconnect and subsequently reconnect the exhaust ducts for combustion products. For heaters connected to a water system, the connection between the system and the product must be such as to allow a qualified technician to move the heater at least 1 metre away from adjacent walls during non-routine maintenance

VENTILATION AND AERATION OF THE INSTALLATION AREA

AS THESE PRODUCTS DRAW COMBUSTION AIR FROM THE INSTALLATION ROOM, IT IS **MANDATORY** TO ENSURE A SUFFICIENT SUPPLY OF FRESH AIR WITHIN THE ROOM ITSELF. IN THE CASE OF AIRTIGHT WINDOWS AND DOORS (E.G. ENERGY-EFFICIENT HOMES), THE SUPPLY OF FRESH AIR MAY NO LONGER BE GUARANTEED, WHICH CAN COMPROMISE THE APPLIANCE'S DRAUGHT, USER COMFORT AND SAFETY.

IMPORTANT: For improved air quality and proper oxygenation of the environment, combustion air can be drawn directly from the outside via a connection to a flexible hose. The connecting pipe (NOT supplied) must be smooth and have a minimum diameter as specified in **Figure 2**. Its maximum length must not exceed 3 m for STOVES and COOKERS and 4 m for FIREPLACES, with no more than three bends. If this hose is connected directly to the outside, it must be equipped with a windbreak.

FOR PROPER OPERATION OF THE APPLIANCE, IT IS MANDATORY TO ENSURE AN ADEQUATE SUPPLY OF AIR IN THE INSTALLATION AREA, BOTH FOR COMBUSTION AND FOR RE-OXYGENATION OF THE ROOM.

This means that, through dedicated openings communicating with the outside, combustion air must be able to circulate even when doors and windows are closed.

The air intakes must meet the following requirements:

- BE PROTECTED USING GRATES, WIRE MESH, ETC., WITHOUT REDUCING THE NET FREE SECTION;
- BE DESIGNED TO ALLOW FOR MAINTENANCE OPERATIONS;
- BE POSITIONED IN A WAY THAT PREVENTS OBSTRUCTION;
- IF THERE ARE INTAKE HOODS IN THE ROOM WHERE THE APPLIANCE IS INSTALLED, THEY MUST NOT BE OPERATED SIMULTANEOUSLY. These may cause smoke to escape into the room, even when the firebox door is closed.

Fresh, uncontaminated air intake can also be provided from an adjacent room (indirect ventilation and airing), provided the airflow is unobstructed through permanent openings connected to the outside.
THE ADJACENT ROOM MUST NOT BE USED AS A GARAGE, STORAGE AREA FOR COMBUSTIBLE MATERIALS, HIGH FIRE-RISK AREA, BATHROOM, BEDROOM OR SHARED/COMMON AREA OF THE BUILDING.

Ventilation is considered sufficient when the room is equipped with air intakes according to the table:

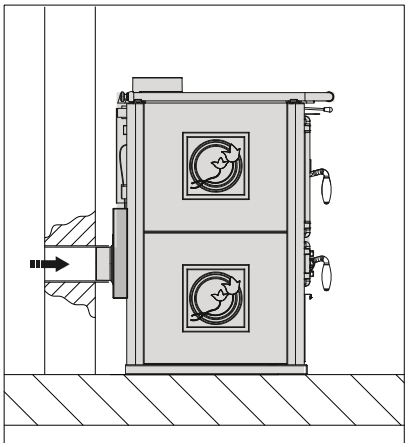
Appliance categories	Reference standard	Percentage of the net opening section with respect to the flue gas section in the appliance	Minimum net opening size of the ventilation duct
Fireplaces	EN 16510-2-2	50 %	200 cm^2
Stoves	EN 16510-2-1	50 %	100 cm^2
Cookers	EN 16510-2-3	50 %	100 cm^2

INSTALLATION IS PROHIBITED IN ROOMS WITH A FIRE HAZARD. INSTALLATION IS ALSO PROHIBITED IN RESIDENTIAL ROOMS WHERE THE MEASURED PRESSURE DIFFERENCE BETWEEN THE INDOOR AND OUTDOOR ENVIRONMENT EXCEEDS 4 Pa – REFERENCE FOR ITALY ACCORDING TO UNI 10683 REGULATIONS.
UNDER ALL CONDITIONS, INCLUDING THE PRESENCE OF EXTRACTOR HOODS AND/OR CONTROLLED FORCED VENTILATION SYSTEMS, THE PRESSURE DIFFERENCE BETWEEN THE ROOMS WHERE THE HEATER IS INSTALLED AND THE OUTSIDE MUST ALWAYS BE ≥ -4 Pa (E.G. -3 Pa IS AN ACCEPTABLE VALUE).

IT IS MANDATORY TO COMPLY WITH ALL NATIONAL, REGIONAL, PROVINCIAL AND LOCAL LAWS AND REGULATIONS IN THE COUNTRY WHERE THE APPLIANCE IS INSTALLED.

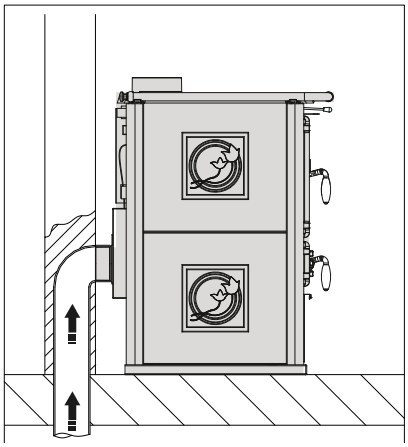
Figure 2

FRESH AIR INTAKE



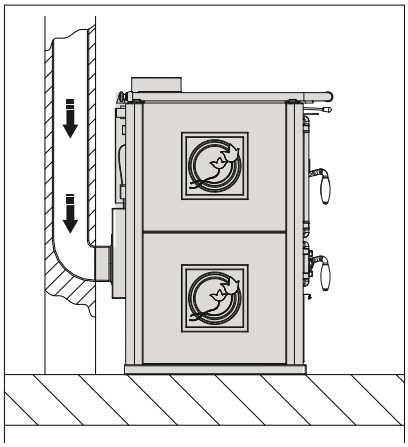
Air supply from the rear

Max. pipe length 3 m



Air supply from below

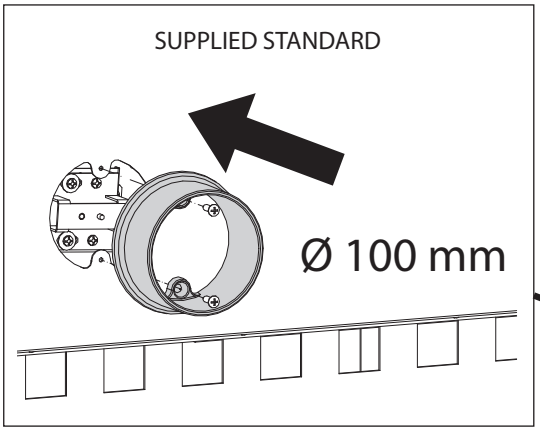
Max. pipe length 3 m

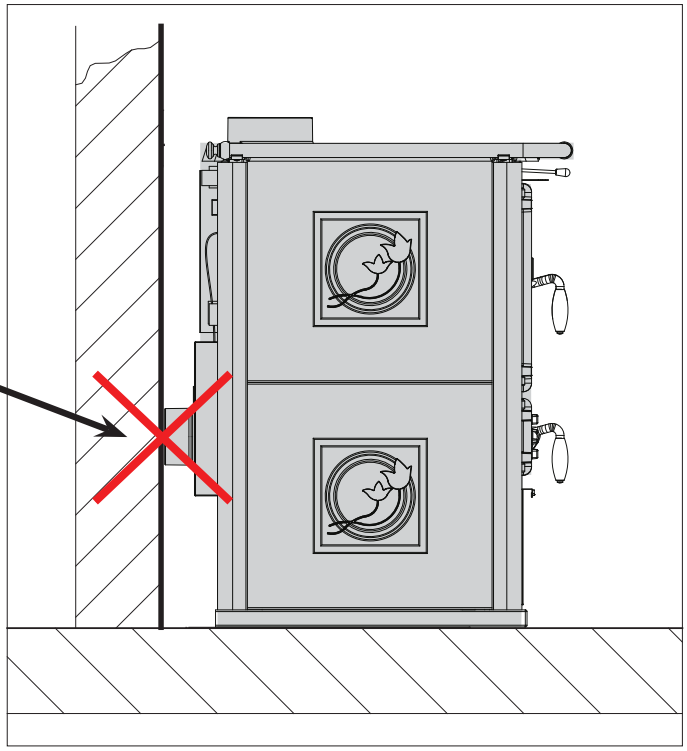


Air supply from above

ONLY with Certified System

FIREPROOF FLEXIBLE HOSE NOT SUPPLIED!





DO NOT PLACE THE STOVE AGAINST THE WALL WITH THE RING INSTALLED, OTHERWISE THE PRODUCT WILL NOT WORK.

HYDRAULIC SYSTEM

BEFORE INSTALLATION, IT IS RECOMMENDED TO THOROUGHLY FLUSH ALL SYSTEM PIPING TO REMOVE ANY RESIDUES THAT COULD AFFECT THE PROPER OPERATION OF THE HEATING UNIT.

The DSA model heating units can be installed either in an OPEN expansion VESSEL system or in a CLOSED expansion VESSEL system.

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OPEN EXPANSION VESSEL

THE SYSTEM WITH OPEN EXPANSION VESSEL MUST **NECESSARILY** FEATURE:

1. **OPEN EXPANSION VESSEL:** a vessel with a capacity equal to 10% of the total water content of the heating unit and the system. The vessel must be positioned at the highest point of the system, at least 2 m above the highest-positioned radiator.
2. **SAFETY PIPE:** a pipe which, by the shortest route and without any descending or siphon sections, connects the flow outlet of the heating unit to the top of the open expansion vessel. **CAUTION:** THE INTERNAL DIAMETER OF THE FLOW PIPE CONNECTING THE HEATING UNIT TO THE OPEN EXPANSION VESSEL MUST BE THE SAME AS THE INTERNAL DIAMETER OF THE FLOW CONNECTOR ON THE HEATING UNIT. THIS CONNECTION PIPE MUST BE FREE OF ANY SHUT-OFF DEVICES.
3. **FILLING PIPE:** a pipe that connects the bottom of the open expansion vessel with the system return pipe. The minimum cross-section must be ¾" gas. All these components must under no circumstances contain shut-off devices that could accidentally isolate them, and they must be located in environments protected from frost, as freezing could cause rupture or even explosion of the boiler body. In the event of exposure to frost, it is advisable to add a suitable percentage of antifreeze liquid to the system water to eliminate the risk completely. Under no circumstances should water circulate within the open expansion vessel between the safety pipe and the filling pipe. Such circulation would oxygenate the water, causing rapid corrosion of both the heating unit and the system
4. **AUTOMATIC THERMAL RELIEF VALVE – VST:** this constitutes an additional **positive** safety measure capable of preventing boiling even in the absence of electrical power. It consists of a valve body similar to a pressure safety valve which, unlike the latter, opens when it reaches a pre-calibrated temperature (usually 94 – 95° C) by releasing hot water from the system flow, which is then replaced by an equal amount of cold water supplied through the filling pipe of the open expansion vessel, thereby dissipating the excess heat.
5. **1.5 bar SAFETY VALVE:** the maximum permitted operating pressure for the system is 1.5 bar (equivalent to 15 m water column); higher pressures may cause deformation and rupture of the boiler body.
6. **OTHER SAFETY DEVICES** as required by current applicable regulations.
7. **CIRCULATING PUMP:** this should preferably be installed on the return line to prevent loss of prime at very high water temperatures. Check, however, that it does not circulate water through the open expansion vessel, as this would cause continuous oxygenation of the water and, consequently, rapid corrosion of the boiler body. Its head must be such that it does not create forced circulation through the open expansion vessel. It must also be connected to a thermostat or to the electronic control unit supplied as an OPTIONAL accessory.
8. **THERMOSTATIC MIXING VALVE** – (see chapter)

CAUTION: THE TEMPERATURE SAFETY SENSORS MUST BE INSTALLED ON THE MACHINE OR AT A DISTANCE NOT GREATER THAN 30 CM FROM THE FLOW CONNECTION OF THE HEATING UNIT. IF THE HEATING UNITS ARE NOT SUPPLIED WITH ALL DEVICES, ANY MISSING ONES MAY BE INSTALLED ON THE FLOW PIPE OF THE HEATING UNIT, AT A DISTANCE NO GREATER THAN 1 M FROM THE UNIT. ALL THESE COMPONENTS MUST UNDER NO CIRCUMSTANCES CONTAIN SHUT-OFF DEVICES THAT COULD ACCIDENTALLY ISOLATE THEM, AND THEY MUST BE LOCATED IN ENVIRONMENTS PROTECTED FROM FROST, AS FREEZING COULD CAUSE RUPTURE OR EVEN EXPLOSION OF THE BOILER BODY.

CAUTION: UNDER NO CIRCUMSTANCES SHOULD THE FIRE BE LIT BEFORE THE SYSTEM HAS BEEN COMPLETELY FILLED WITH WATER; DOING SO WOULD CAUSE VERY SERIOUS DAMAGE TO THE ENTIRE STRUCTURE. THE SYSTEM MUST BE FILLED VIA THE FILLING HOSE DIRECTLY INTO THE OPEN EXPANSION VESSEL TANK, TO PREVENT EXCESSIVE WATER NETWORK PRESSURE FROM DEFORMING THE BOILER BODY.

THE SYSTEM MUST BE KEPT CONSTANTLY FILLED WITH WATER, EVEN DURING PERIODS OF NON-USE. DURING THE WINTER PERIOD, SHOULD THE APPLIANCE NOT BE USED, ANTIFREEZE SUBSTANCES MUST BE ADDED.

CLOSED EXPANSION VESSEL

THE SYSTEM WITH CLOSED EXPANSION VESSEL MUST NECESSARILY FEATURE:

1. **SAFETY VALVE** – the maximum permitted operating pressure for the system is specified as: See DECLARATION OF PERFORMANCE – CE MARKING INFORMATION; pressures above this level may cause deformation and rupture of the boiler body. **CAUTION:** THE INTERNAL DIAMETER OF THE FLOW PIPE CONNECTING THE HEATING UNIT TO THE SAFETY VALVE MUST BE THE SAME AS THE INTERNAL DIAMETER OF THE FLOW CONNECTOR ON THE HEATING UNIT. THIS CONNECTION PIPE MUST BE FREE OF ANY SHUT-OFF DEVICES.
2. **THERMOSTATIC MIXING VALVE** – (see chapter)
3. **DSA AUTOMATIC THERMAL RELIEF VALVE** with dual safety sensor
4. **CLOSED EXPANSION VESSEL** connected to the return line of the heating unit. **CAUTION:** THE INTERNAL DIAMETER OF THE RETURN PIPE CONNECTING THE HEATING UNIT TO THE CLOSED EXPANSION VESSEL MUST BE THE SAME AS THE INTERNAL DIAMETER OF THE RETURN CONNECTOR ON THE HEATING UNIT. THIS CONNECTION PIPE MUST BE FREE OF ANY SHUT-OFF DEVICES.
5. **CIRCULATING PUMP CONTROL THERMOSTAT**
6. **AUDIBLE ALARM ACTIVATION THERMOSTAT**
7. **AUDIBLE ALARM**
8. **TEMPERATURE INDICATOR**
9. **PRESSURE INDICATOR**
10. **CIRCULATION SYSTEM**

CAUTION: THE TEMPERATURE SAFETY SENSORS MUST BE INSTALLED ON THE APPLIANCE ITSELF, OR AT A DISTANCE NOT GREATER THAN 30 CM FROM THE FLOW CONNECTION OF THE HEATING UNIT. IF THE HEATING UNITS ARE NOT SUPPLIED WITH ALL DEVICES, ANY MISSING ONES MAY BE INSTALLED ON THE FLOW PIPE OF THE HEATING UNIT, AT A DISTANCE NO GREATER THAN 1 M FROM THE UNIT. ALL OF THESE COMPONENTS MUST UNDER NO CIRCUMSTANCES BE FITTED WITH SHUT-OFF DEVICES THAT COULD ACCIDENTALLY ISOLATE THEM, AND THEY MUST BE LOCATED IN ENVIRONMENTS PROTECTED FROM FROST. IF FREEZING OCCURS, THIS COULD RESULT IN RUPTURE OR EVEN EXPLOSION OF THE BOILER BODY.

HEATING UNITS FOR DOMESTIC USE INSTALLED IN **CLOSED-VESSEL** HEATING SYSTEMS **MUST** BE EQUIPPED WITH AN INTERNAL COOLING CIRCUIT PROVIDED BY THE MANUFACTURER OF THE APPLIANCE. THIS CIRCUIT IS ACTIVATED BY A **THERMAL SAFETY VALVE** (see chapter **VAST**) THAT REQUIRES NO AUXILIARY POWER AND ENSURES THAT THE TEMPERATURE LIMIT SET BY THE STANDARD IS NOT EXCEEDED. THE CONNECTION BETWEEN THE SUPPLY UNIT AND THE VALVE MUST BE FREE OF SHUT-OFF DEVICES. THE PRESSURE UPSTREAM OF THE COOLING CIRCUIT MUST BE AT LEAST 1.5 BAR.

VAST - DSA AUTOMATIC THERMAL RELIEF VALVE (SUPPLIED AS AN OPTIONAL ACCESSORY)

SOLID FUEL HEATING UNITS MUST BE INSTALLED WITH THE SAFETY DEVICES REQUIRED BY THE LAWS IN FORCE. TO THIS END, THE HEATING UNIT IS EQUIPPED WITH A THERMAL DISCHARGE COIL.

The thermal discharge coil must be connected on one side to the water supply (**chap. DETAILS - pos.18**) and on the other side to the drainage system (**pos.20**). The DSA automatic thermal relief valve, with its sensor connected to fitting **19**, allows cold water to enter the coil inside the boiler once the safety temperature has been reached, discharging the excess heat through pipe **20** to a properly installed drain. The pressure upstream of the cooling circuit must be at least 1.5 bar.

WARNING: WE CANNOT BE HELD LIABLE FOR ANY MALFUNCTION OF THE SYSTEM RESULTING FROM FAILURE TO COMPLY WITH THE INSTRUCTIONS CONTAINED HEREIN, OR FROM THE USE OF UNSUITABLE COMPLEMENTARY PRODUCTS (see chap. TECHNICAL DATA SHEET VAST - THERMOSTATIC VALVE)

SYSTEM CONNECTION AND FILLING

Indicative examples of the system layout are provided in the INSTALLATION DIAGRAM chapter, while the connections to the heating unit are shown in the DIMENSIONS chapter.

CAUTION: SYSTEM FILLING MUST BE CARRIED OUT EXCLUSIVELY BY GRAVITY, ALLOWING WATER TO FLOW FROM THE OPEN EXPANSION VESSEL THROUGH THE FILLING PIPE. THIS PREVENTS EXCESSIVE MAINS WATER PRESSURE FROM DEFORMING OR EVEN RUPTURING THE BOILER BODY.

During this process, open all radiator air vents to prevent the formation of air pockets, and monitor water outflow to avoid accidental flooding.

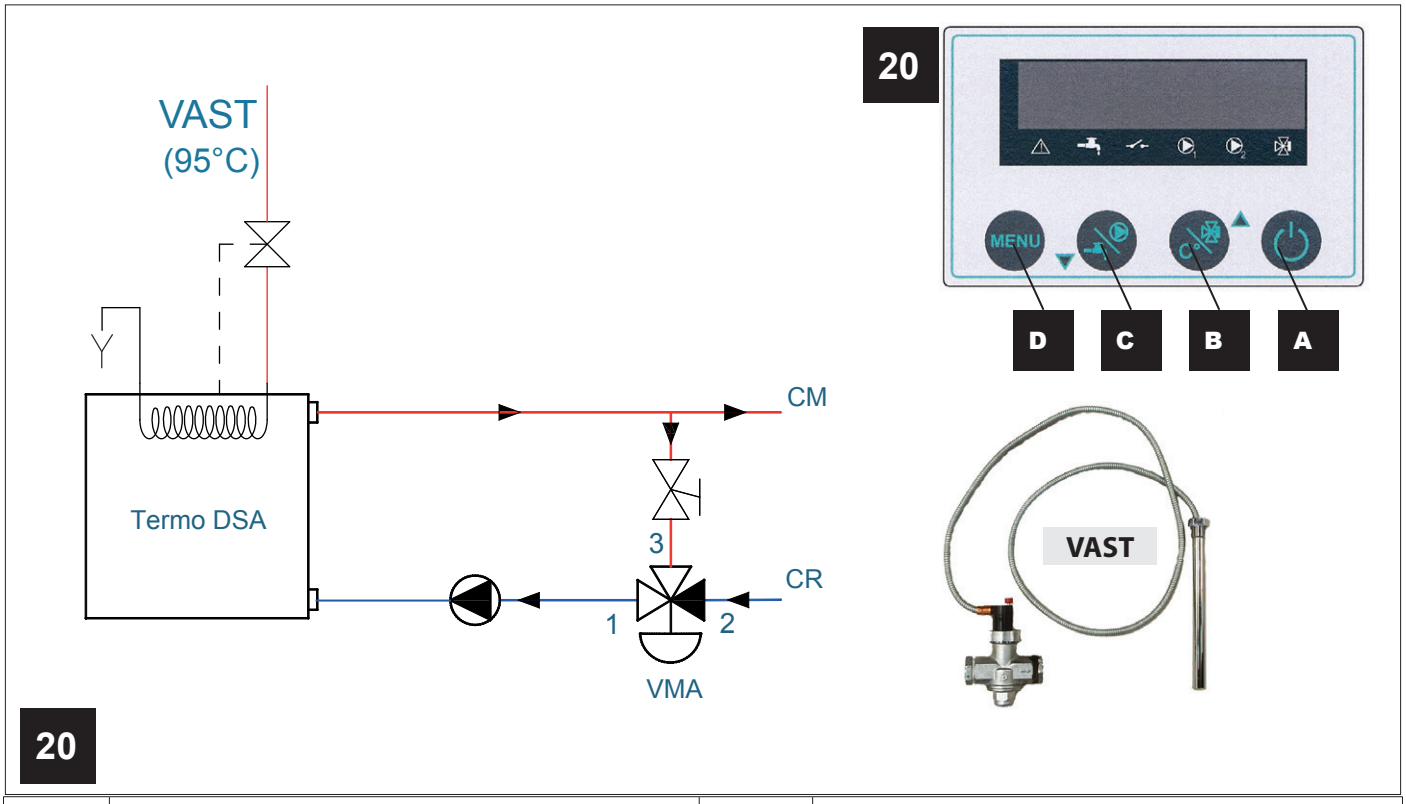
System pressure testing must be carried out with the open expansion vessel pressure.

THE SYSTEM MUST BE KEPT CONSTANTLY FILLED WITH WATER, EVEN DURING PERIODS WHEN THE HEATING UNIT IS NOT IN USE. DURING THE WINTER PERIOD, SHOULD THE APPLIANCE NOT BE USED, ANTIFREEZE SUBSTANCES MUST BE ADDED.

INSTALLATION DIAGRAM

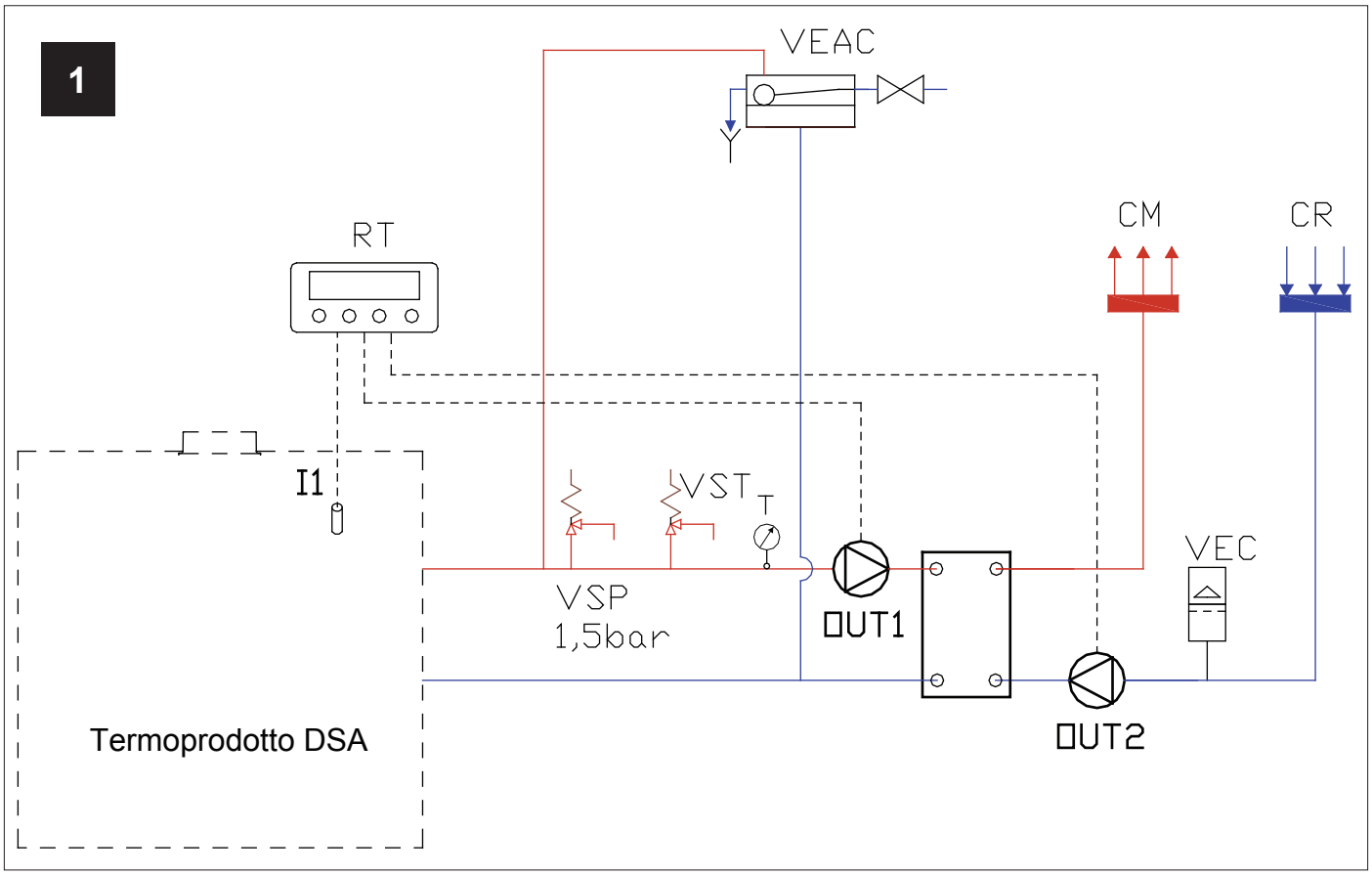
Our responsibility is limited solely to the supply of the appliance. Your system must be installed correctly following the instructions provided, in accordance with applicable regulations, and all operations must be performed by qualified personnel; see the chapter "INSTALLATION REQUIREMENTS".
The diagrams are purely indicative, therefore they do not have design value. Under the law, this documentation is strictly confidential and reserved. Its reproduction, use or disclosure to third parties is prohibited. Any disclosure without the prior authorisation of LA NORDICA S.p.A. will be subject to the penalties provided by law.

B	DHW tank	**SP**	Plate heat exchanger
C-C1-C2	Circulator	**TS**	Fixture end connections
CM	System delivery manifold	**T**	Thermometer
CR	System return manifold	**V**	Ball valve
I1	HEATING UNIT Probe input	**VAST**	DSA Automatic thermal relief valve
I2	BUFFER TANK Probe input	**VB**	Balancing valve
I3	BOILER Probe input	**VDM**	Motorised diverter valve
I4	FLOW SWITCH input	**VEAC**	Boiler open expansion vessel
M	Pressure gauge	**VEC**	Closed expansion vessel
OUT 1	Circulator 1 output	**VMS**	Domestic hot water mixing valve
OUT 2	Circulator 2 output	**VSP**	Safety valve
OUT 3	3-way valve output	**VST**	90°C thermal discharge valve
P	Buffer tank	**VMA**	Thermostatic mixing valve
RT	Heating unit regulator (optional)	**VR**	Non-return valve
SF	Vent		

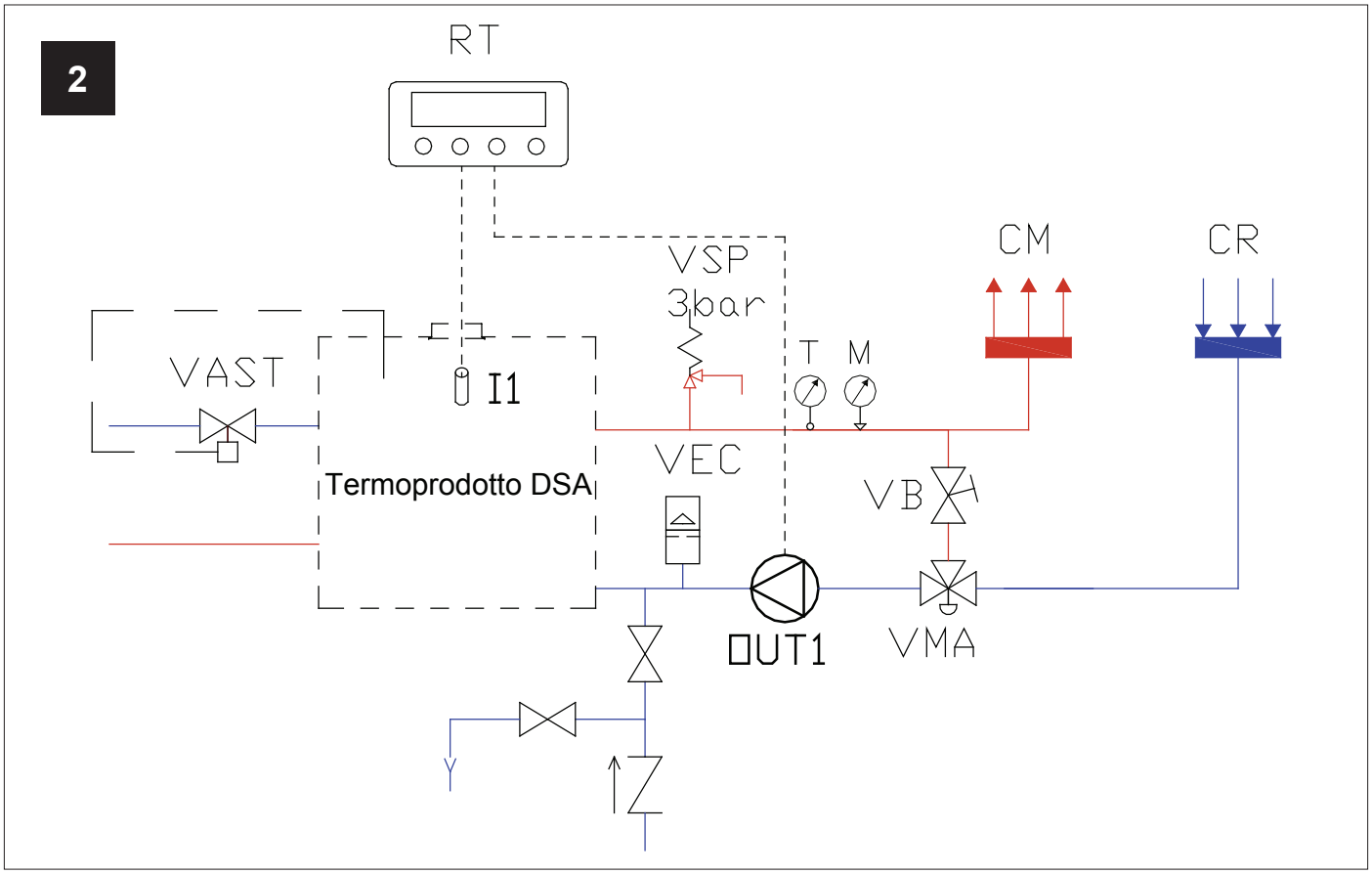


A	ON / OFF	**C**	SET Circulating pump
B	SET 3-way valve	**D**	MENU

OPEN vessel **HEATING UNIT (PR07= 0 - PR08=OFF - PR11=OFF)**

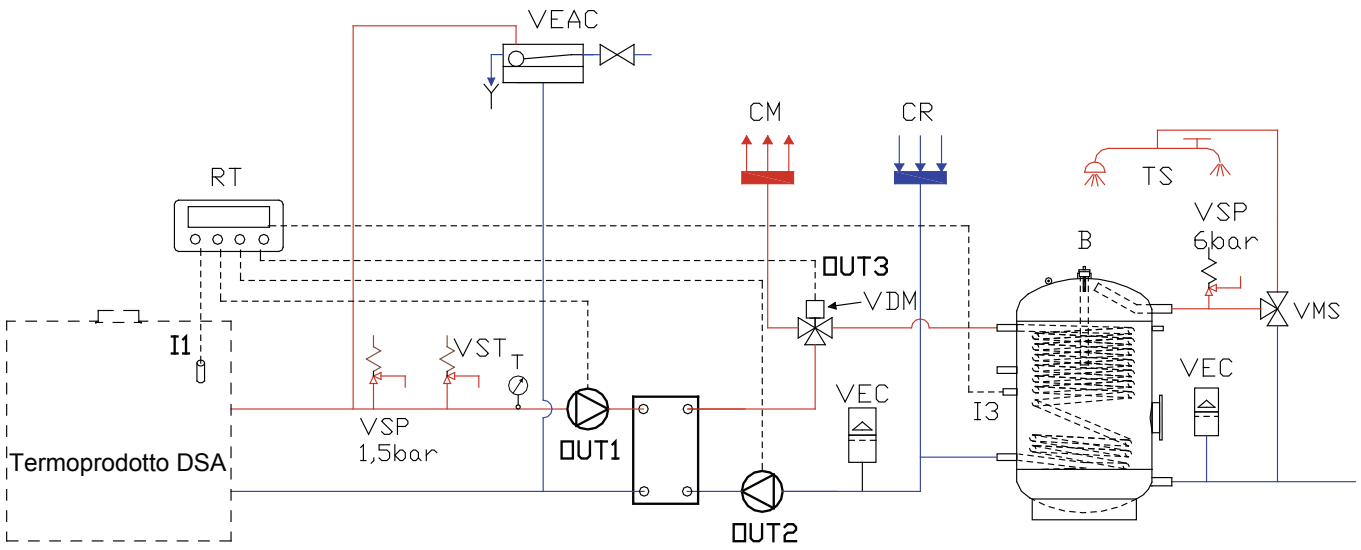


CLOSED vessel **HEATING UNIT (PR07= 0 - PR08=OFF - PR11=OFF)**



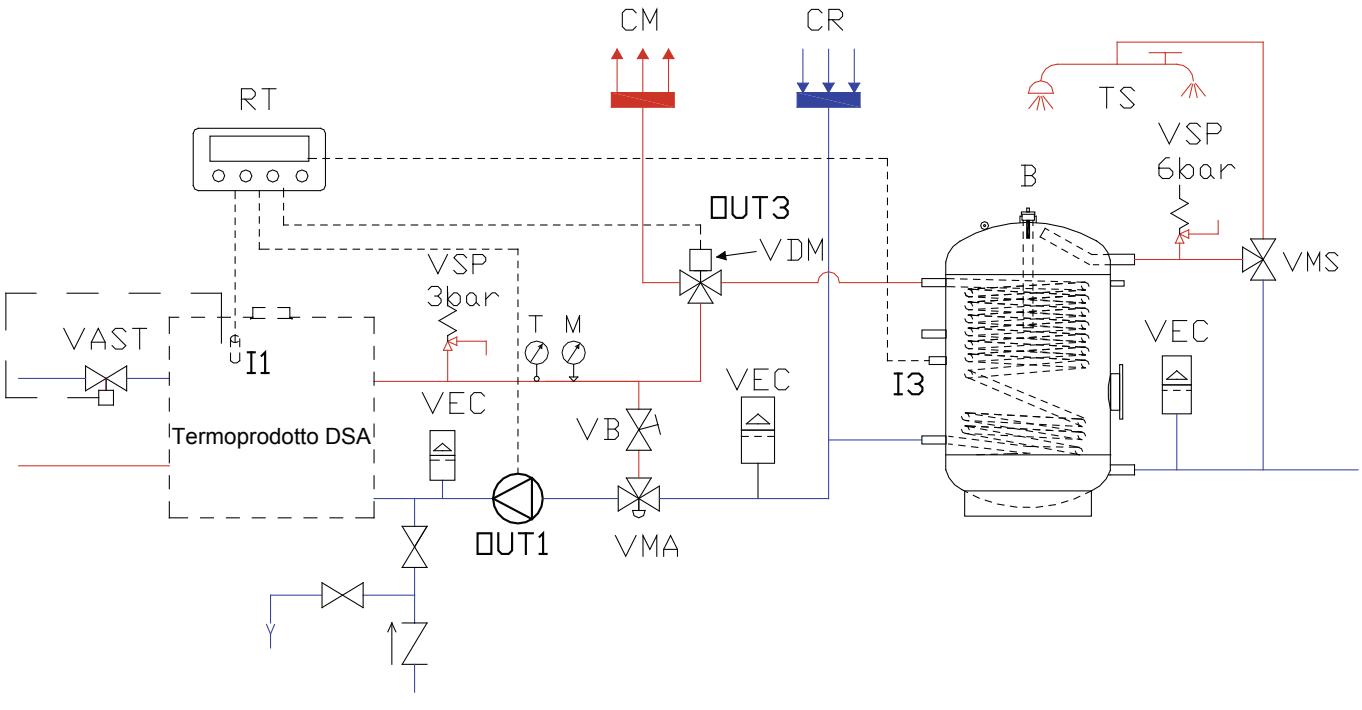
OPEN vessel **HEATING UNIT + Boiler (PR07= 0 - PR08=ON - PR11=OFF)**

3



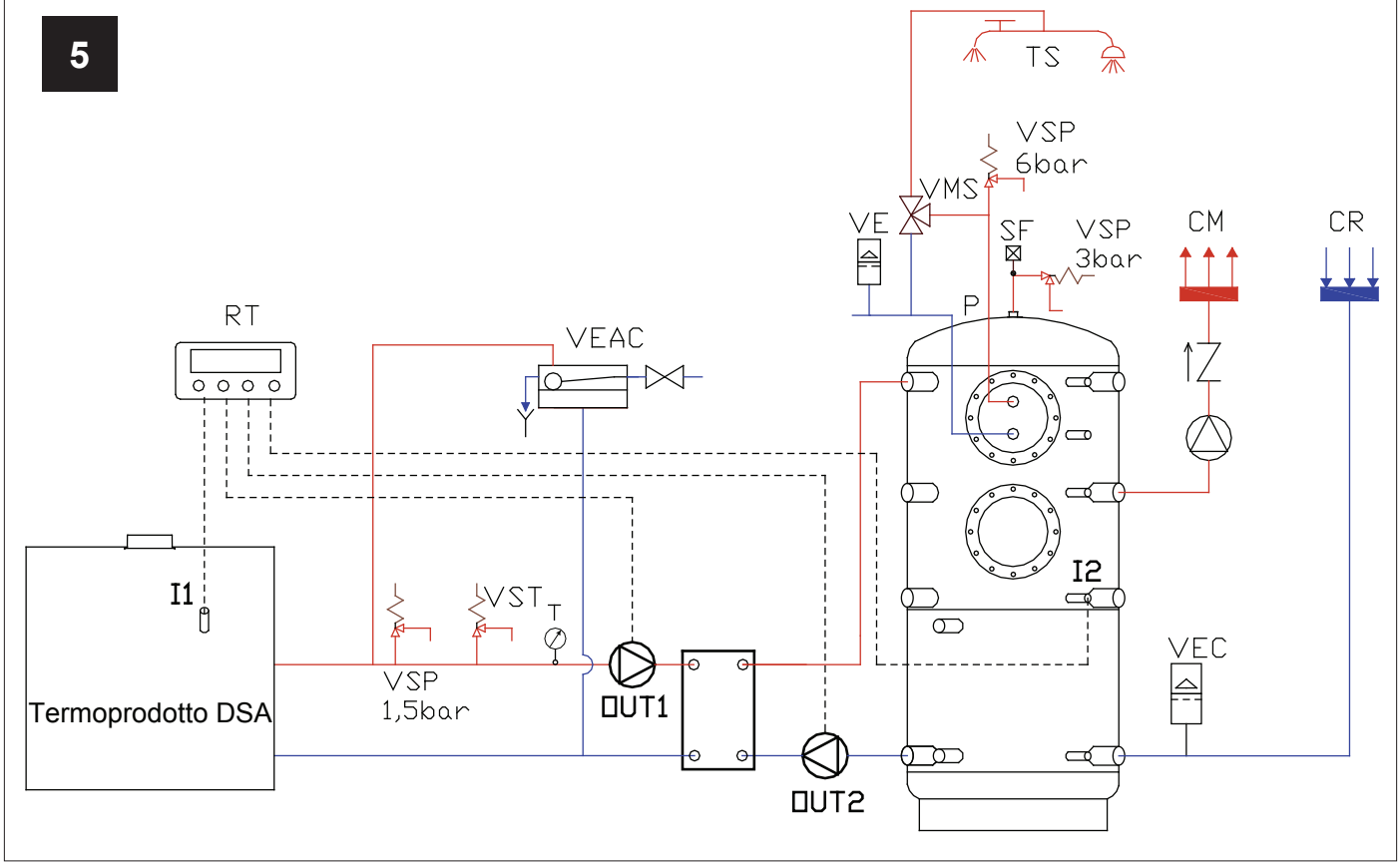
CLOSED vessel **HEATING UNIT + Boiler (PR07= 0 - PR08=ON - PR11=OFF)**

4



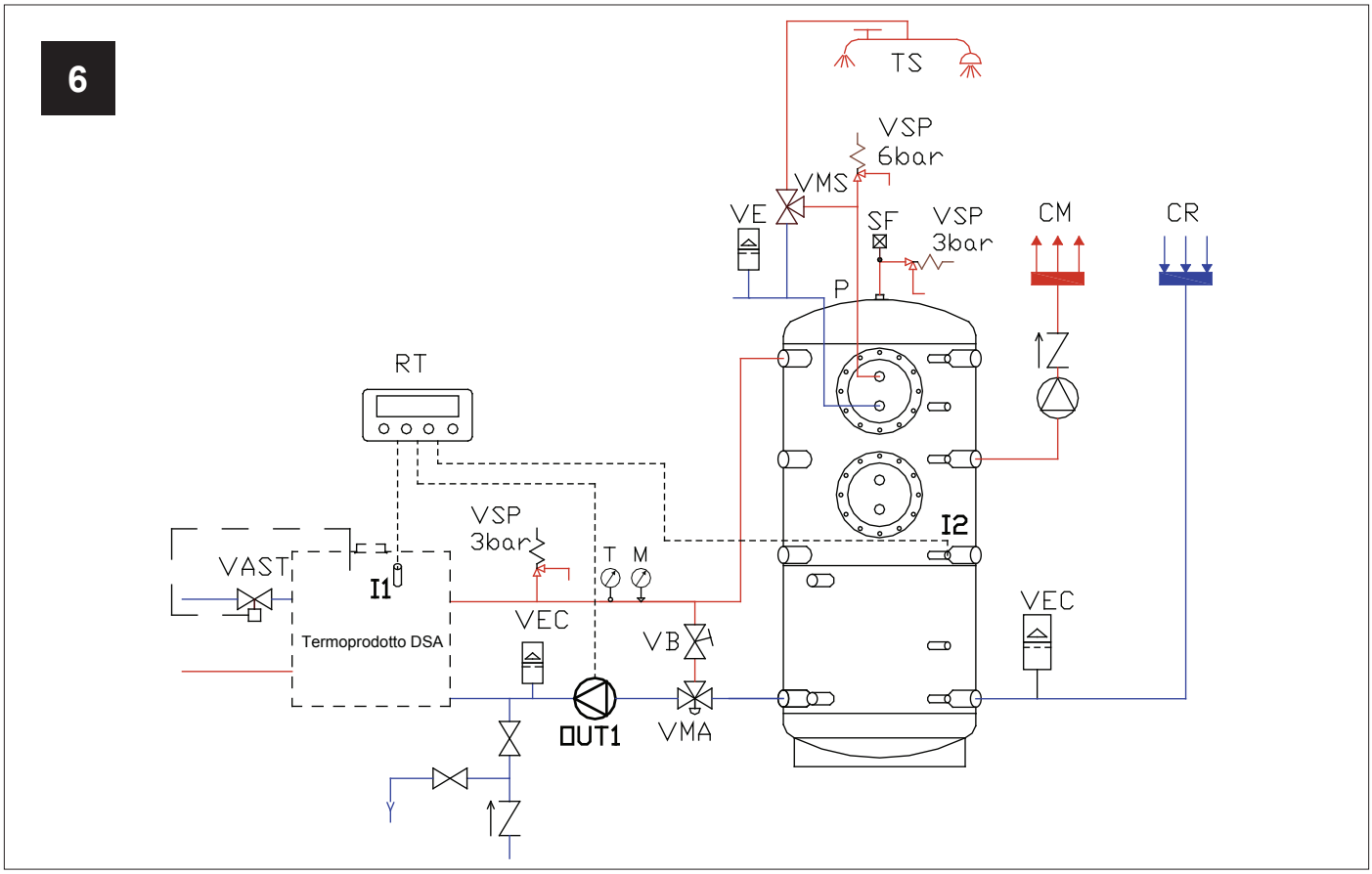
OPEN vessel **HEATING UNIT + Buffer Tank (PR07= 0 - PR08=OFF - PR11=ON)**

5



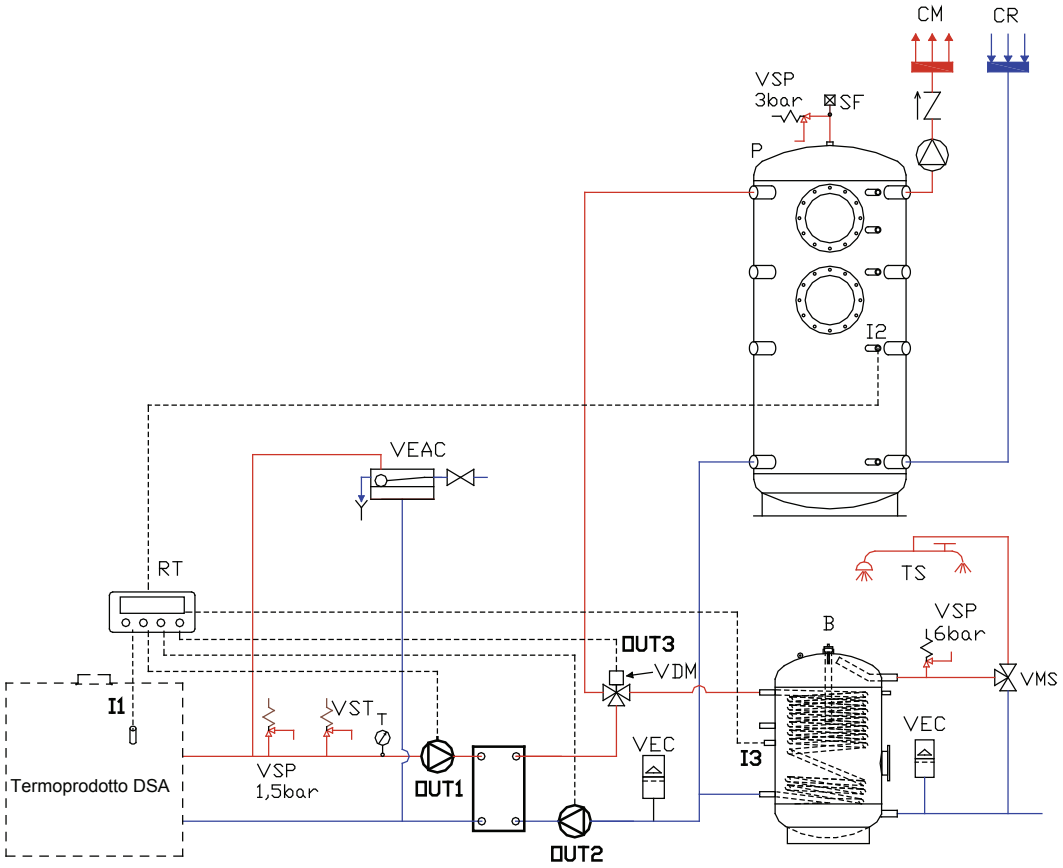
CLOSED vessel **HEATING UNIT + Buffer Tank (PR07= 0 - PR08=OFF - PR11=ON)**

6



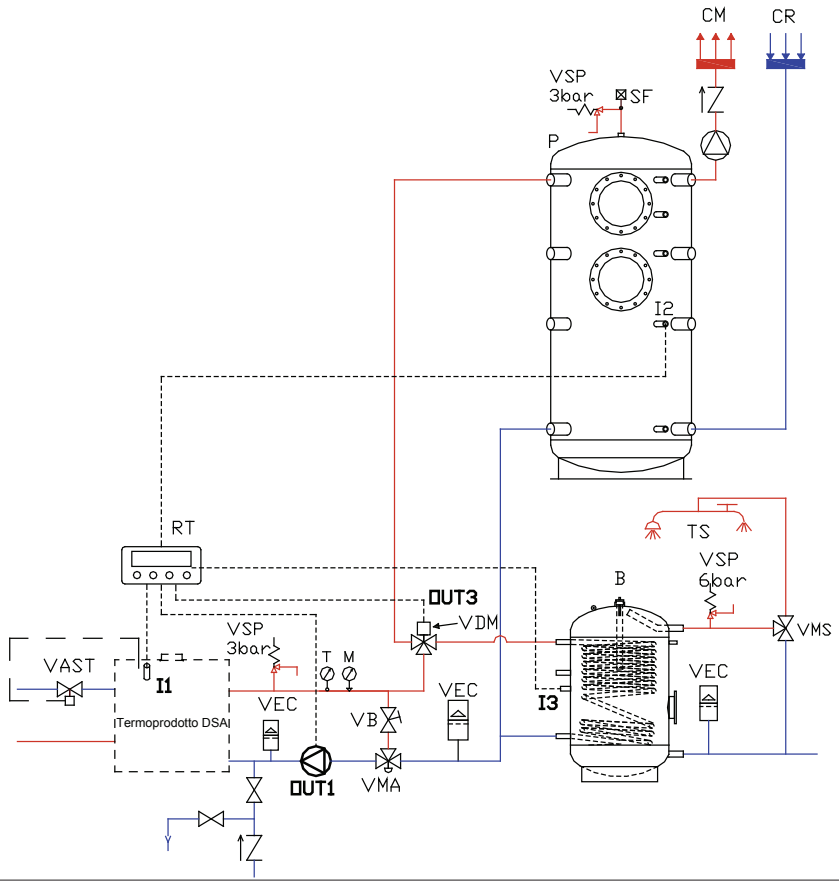
OPEN vessel **HEATING UNIT + Boiler + Buffer Tank (PR07= 0 - PR08=ON - PR11=ON)**

7



CLOSED vessel **HEATING UNIT + Boiler + Buffer Tank (PR07= 0 - PR08=ON - PR11=ON)**

8



PERMITTED/NOT PERMITTED FUELS

Only logs may be used as fuel. Only dry logs (max. moisture content 20%) should be used.
DO NOT EXCEED THE MAXIMUM FIREWOOD LOAD - SEE TECHNICAL DATA AND HOURLY CONSUMPTION IN THE DOCUMENT "CE MARKING INFORMATION".

NON-RESINOUS PRESSED WOOD LOGS MUST BE USED WITH CAUTION TO AVOID OVERHEATING THAT COULD DAMAGE THE APPLIANCE, AS THEY HAVE A HIGH HEATING VALUE.

The firewood must have a moisture content of less than 20% and be stored in a dry location. Damp wood makes ignition more difficult, as more energy is required to evaporate the moisture present. The moisture content also creates the disadvantage that, as the temperature drops, the water condenses first in the firebox and then in the chimney, causing a considerable deposit of soot with the subsequent possible risk of fire.
Freshly cut wood contains about 60% H_2O, making it unsuitable for burning. It must be stored in a dry, ventilated area (e.g. under a shelter) for at least two years before use.

THE FOLLOWING MATERIALS MUST NOT BE BURNED: COAL, WOOD SCRAPS, BARK RESIDUE, WOOD PANELS, DAMP OR PAINTED WOOD, PLASTICS. USING THESE MATERIALS WILL VOID THE PRODUCT WARRANTY.

PAPER AND CARDBOARD SHOULD ONLY BE USED FOR IGNITION.

BURNING WASTE IS STRICTLY PROHIBITED AS IT MAY DAMAGE THE APPLIANCE AND THE FLUE, CAUSE HEALTH RISKS AND LEAD TO COMPLAINTS FROM NEIGHBOURS DUE TO UNPLEASANT ODOURS.

Wood is not a long-burning fuel, meaning continuous heating throughout the night is not possible.

Species	kg/m³	kWh/kg 20% Moisture
Beech	750	4.0
Turkey 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

* UNSUITABLE RESINOUS WOODS

THE CONTINUOUS AND PROLONGED USE OF FIREWOOD THAT IS PARTICULARLY RICH IN AROMATIC OILS (E.G., EUCALYPTUS, MYRTLE, ETC.) CAUSES THE RAPID DETERIORATION (FLAKING) OF THE CAST-IRON COMPONENTS IN THE PRODUCT.

The declared technical data were obtained using class "A1" beech wood in accordance with UNI EN ISO 17225-5, with a moisture content of less than 20%. The use of other wood types may require specific adjustments and could result in different product performance.

CALCULATION OF THE HEAT OUTPUT

There is no absolute rule for calculating the correct power required. This power depends on the space to be heated, but is also largely influenced by the level of insulation.
On average, the heat output required for a properly insulated room will be 3Ø kcal/h per m3 (for an outside temperature of 0°C). Since 1 kW corresponds to 860 kcal/h, we can assume a value of 35 W/m3.
Assuming you wish to heat a 150 m3 (10 x 6 x 2.5 m) room in an insulated house, you will need 150 m3 x 35 W/m3 = 5250 W or 5.25 kW. As a primary heating source, an 8 kW appliance should be sufficient.

		Indicative combustion value		Required quantity in relation to 1 kg of dry wood
Fuel	**Unit**	**kcal/h**	**kW**	
Dry wood (15% moisture)	kg	3600	4.2	1.00
Wet wood (50% moisture)	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	kWh	860	1.0	4.19

FLUE EXHAUST

FLUE PIPE

THE COMPONENTS OF THE COMBUSTION GAS EVACUATION SYSTEM MUST BE SELECTED AND RATED IN ACCORDANCE WITH CURRENT REGULATIONS, CONSIDERING THE SPECIFIC INSTALLATION CONDITIONS.

The following checks are recommended:

- The chimney system must be assessed in accordance with the following technical standards (where applicable): EN 15287-1, EN 15287-2, EN 13063-1, EN 13063-2, EN 1457, EN 1806, EN 1856-1, EN 1856-2, and EN 13384-1;
- The proper operation of the chimney system must be verified in accordance with EN 13384-2, based on the specific installation conditions;
- The number of directional changes, including those caused by the use of T-joints, must not exceed four;
- A T-joint with a condensate collection cap must be installed at the base of the vertical section;
- The vertical duct may be located either inside or outside the building. If the flue pipe is connected to an existing flue, it must be certified for solid fuels;
- The flue pipe must include at least one airtight port for potential flue gas sampling;
- All sections of the flue pipe must be accessible for inspection;
- Inspection openings must be provided for cleaning;

When using metal pipes, the following requirements (EN 1856-1 and EN 1856-2) must be met:

FLUE - Temperature class, at least T 600 G (as stated in the technical data sheet), soot-fire resistant.

FLUE PIPE - Temperature class, at least T 600 G (as stated in the technical data sheet), soot-fire resistant.

The flue pipe is the section of piping that connects the appliance to the flue. When connecting it, the following simple but crucial principles must be observed:

- Under no circumstances should the flue pipe have a diameter smaller than that of the appliance's outlet collar. The internal diameter of the connecting pipe must match the external diameter of the appliance's flue exhaust stub (DIN 1298);
- Each metre of horizontal flue pipe travelled causes a significant pressure loss, which must be compensated for by increasing the flue pipe height if necessary;
- Each bend in the flue pipe significantly reduces the flue draught, which must be offset by an adequate increase in height;
- A maximum of three direction changes of no more than 90° each is allowed, including the connection from the appliance to the chimney (UNI 10683). These must be easily inspectable;
- The horizontal length of the flue pipe must be kept to a minimum, and its total horizontal projection must not exceed 4 metres (UNI 10683);
- Horizontal sections must have a minimum upward slope of 3%;
- The use of flexible metal pipes, fibre cement pipes or aluminium pipes is strictly prohibited.
- The connection must be made with stable and robust pipes that comply with all current standards, regulations and legal requirements. The connection to the flue must also be airtight.

CAUTION: WHEN MAKING THE FLUE CONNECTION AND WORKING NEAR FLAMMABLE MATERIALS, FOLLOW THE REQUIREMENTS OF UNI 10683. THE FLUE MUST BE PROPERLY DISTANCED FROM FLAMMABLE OR COMBUSTIBLE MATERIALS USING SUITABLE INSULATION OR AN AIR GAP. MINIMUM CLEARANCE: 25 CM.

IMPORTANT: THE UNUSED FLUE EXHAUST HOLE MUST BE SEALED WITH THE RELATIVE CAP (SEE DETAILS CHAPTER).

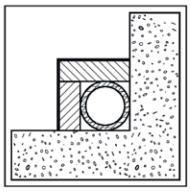
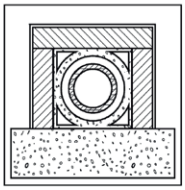
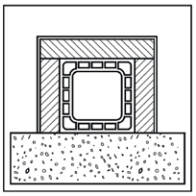
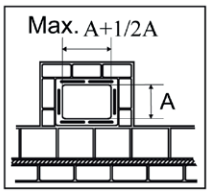
FLUE

ESSENTIAL REQUIREMENTS FOR PROPER OPERATION OF APPLIANCE:

- The internal cross-section should preferably be circular;
- **It must be thermally insulated, waterproof and made of materials resistant to heat, combustion by-products and potential condensates;**
- It must be free of constrictions and have a predominantly vertical layout, with deviations not exceeding 45°;
- If previously used, it must be cleaned;
- All sections of the flue pipe must be accessible for inspection;
- Inspection openings must be provided for cleaning;
- Comply with the technical specifications outlined in the instruction manual;

IF THE FLUE HAS A SQUARE OR RECTANGULAR CROSS-SECTION, THE INTERNAL CORNERS MUST BE ROUNDED WITH A RADIUS OF NO LESS THAN 20 MM. FOR RECTANGULAR CROSS-SECTIONS, THE MAXIMUM SIDE RATIO MUST BE ≤ 1.5.

A cross-section that is too small will reduce the draught. A minimum height of 4 metres is recommended.
The following materials are **PROHIBITED**, as they compromise the proper functioning of the appliance: fibre cement, galvanised steel, rough or porous internal surfaces. **Figure 3** illustrates several possible solutions.

Figure 3	 1	 2	 3	 4
1*	Steel flue with insulated double chamber using material resistant to 400°C. **Efficiency 100% excellent.**			
2*	Refractory flue with insulated double chamber and external cladding in lightweight concrete. **Efficiency 100% excellent.**			
3*	Traditional clay flue with square cross-section and air gaps. **Efficiency 80% good.**			
4	Avoid flues with rectangular internal cross-section whose ratio differs from the design. **Efficiency 40% poor.**			
***- Material compliant with current Standards and Regulations, as well as legal requirements.				

FOR CORRECT INSTALLATION, THE FLUE DIMENSIONS MUST COMPLY WITH THE CE MARKING INFORMATION. FOR INSTALLATIONS WITH DIFFERENT DIMENSIONS, THE FLUE MUST BE SIZED IN ACCORDANCE WITH STANDARD EN13384-1.

A flue with an excessively large cross-section may generate a volume too large to be heated, thus causing operational difficulties for the appliance. To prevent this, it should be lined along its entire height. A cross-section that is too small will reduce the draught.

IT IS STRICTLY PROHIBITED TO ROUTE ANY OTHER SYSTEM PIPES OR AIR SUPPLY DUCTS INSIDE THE FLUE. ADDITIONALLY, IT IS PROHIBITED TO CREATE FIXED OR MOVABLE OPENINGS IN THE FLUE FOR THE CONNECTION OF ADDITIONAL UNRELATED APPLIANCES (SEE THE CHAPTER ON CONNECTING AN OPEN FIREPLACE OR FIREBOX TO THE FLUE).

THE DRAUGHT GENERATED BY YOUR FLUE MUST BE SUFFICIENT BUT NOT EXCESSIVE.
Measurements must always be taken when the appliance is hot (rated heat output).
If the negative pressure exceeds 17 Pa (= 1.7 mm water column), it must be reduced by installing an additional draught regulator on the exhaust pipe or inside the chimney, in accordance with current regulations.

FOR BEST PERFORMANCE OF THE APPLIANCE, THERE MUST BE A SUFFICIENT SUPPLY OF COMBUSTION AIR TO THE INSTALLATION AREA (see the chapter on VENTILATION AND AIRING OF INSTALLATION ROOMS).

SHARED CHIMNEY FLUE

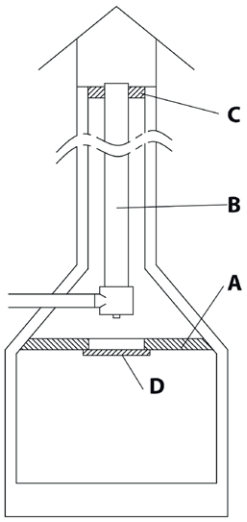
Check on the CE Technical Data Sheet whether the product is suitable for installation in a shared chimney flue (i.e. with multiple connection).

Suitable devices can be installed in shared flue systems provided that:
- installation in a shared chimney flue (i.e. with multiple connection) is allowed in the place of installation;
- the requirements of national and regional Standards are strictly complied with [for GERMANY, for example, DIN EN 13384-2, DIN V 18160-1, DIN 18896 and MFeuV-2007 (Muster-Feuerungsverordnung)];
- the installer or district chimney sweep has inspected and approved the installation conditions.

Please also remember the following indications, which the end user must comply with:
- The device can be operated only with the doors closed.
- The doors and all setting devices must remain closed when the device is not on (except for cleaning and maintenance operations).

FLUE FOR AN OPEN FIREPLACE OR FIREBOX

When using the flue of an open fireplace or firebox, the hood must be airtight below the connection point of the flue pipe (Pos. **A** **Figure 4**.
If the flue is too large (e.g. 30x40 cm or 40x50 cm), it must be lined with a stainless steel pipe with a minimum diameter of 200 mm (Pos. **B)**, ensuring that the remaining space between the pipe and the flue is completely sealed immediately below the chimney pot (Pos. **C**.

Figure 4	Images are for illustrative purposes	
A	Airtight closure	
B	Stainless steel	
C	Sealing	
D	Inspection hatch	

CHIMNEY POT

THE FLUE DRAUGHT ALSO DEPENDS ON THE SUITABILITY OF THE CHIMNEY POT.
IT IS THEREFORE ESSENTIAL THAT, IF THE POT IS CUSTOM-BUILT, THE OUTLET CROSS-SECTION BE AT LEAST TWICE THE INTERNAL CROSS-SECTION OF THE FLUE (**Figure 5**).

Since the chimney pot must always extend beyond the roof ridge, it must also ensure proper exhaust even in windy conditions (**Figure 6**).

The chimney pot must meet the following requirements:

- Have an internal cross-section equivalent to that of the chimney.
- Have an effective outlet cross-section twice the internal cross-section of the flue.
- Be designed to prevent the infiltration of rain, snow or any foreign objects into the flue.
- Be easy to inspect, allowing for maintenance and cleaning operations.

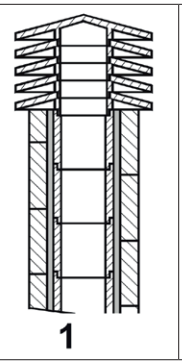
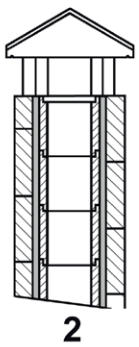
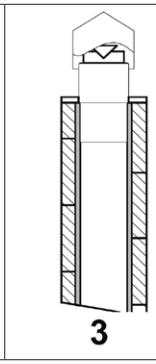
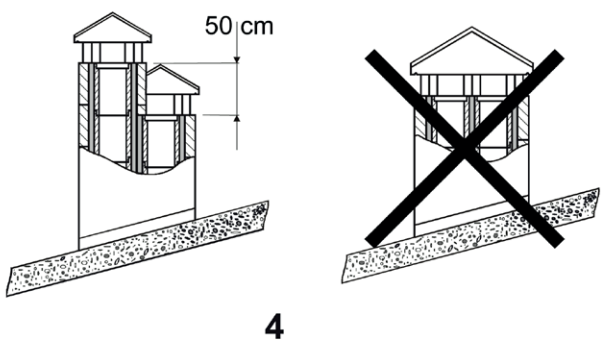
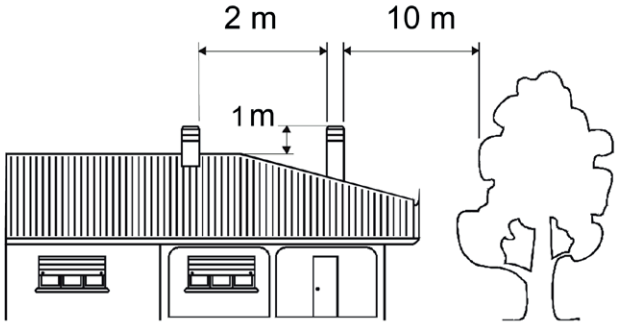
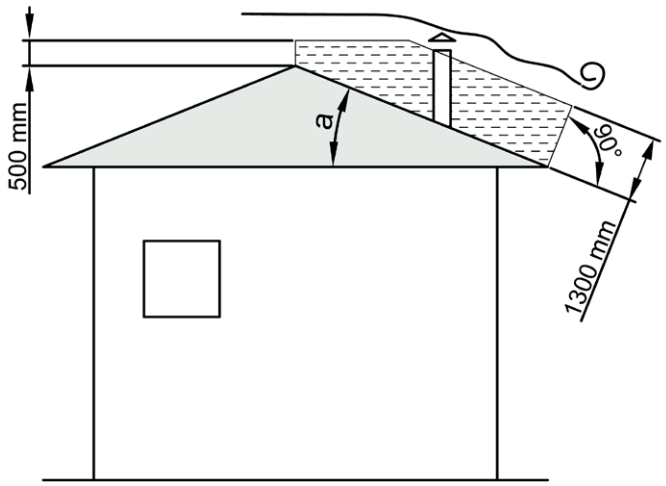
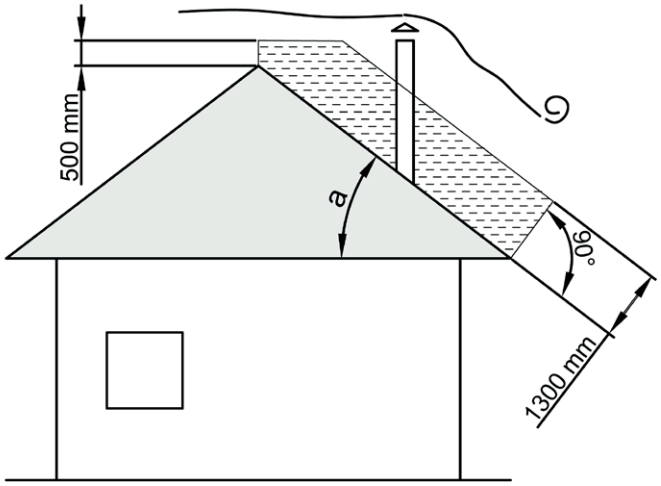
Figure 5				
1	Prefabricated industrial chimney pot, ensuring excellent smoke dispersion.			
2	Custom-built chimney pot. The minimum outlet cross-section must be at least twice, and ideally 2.5 times the internal cross-section of the flue.			
3	Chimney pot for steel flue, featuring an internal smoke baffle cone.			
4	For adjacent flues, one chimney pot must be positioned at least 50 cm higher than the other to prevent pressure transfer between the flues.			

Figure 6	 The pictures are for illustrative purposes only.
	The chimney pot must not have any obstructions within 10 m, such as walls, roof slopes or trees. Otherwise, it must be raised by at least 1 m above the highest obstacle. The chimney pot must extend at least 1 m above the roof ridge.

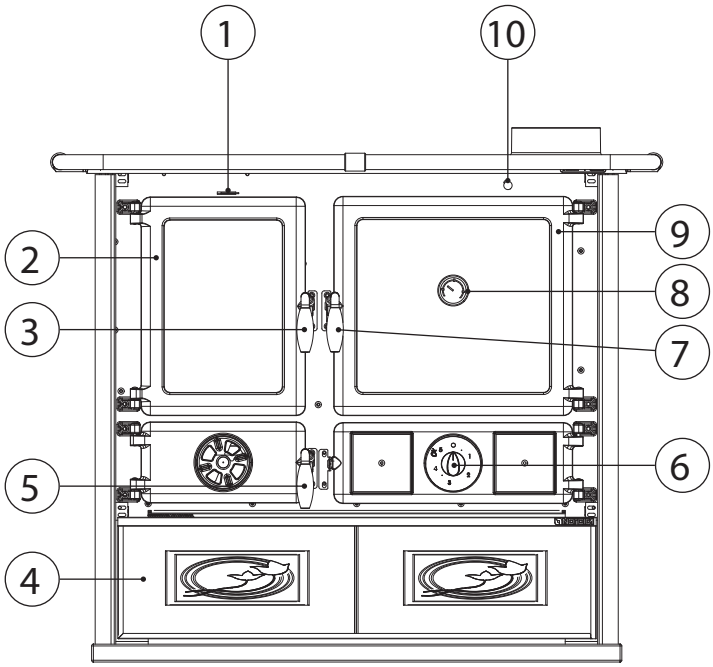
CHIMNEY POT DISTANCES AND POSITIONING (UNI 10683)	
Roof inclination	**>10°**

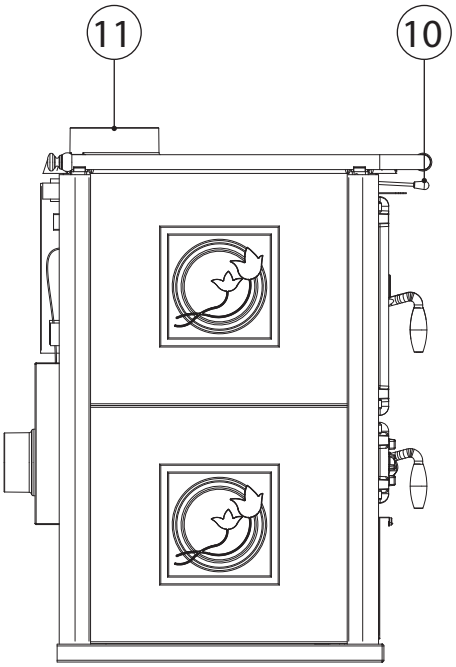
The pictures are for illustrative purposes only.

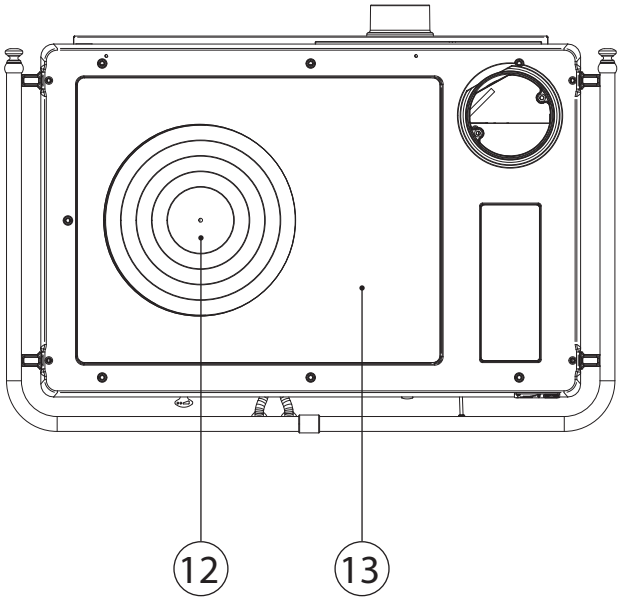


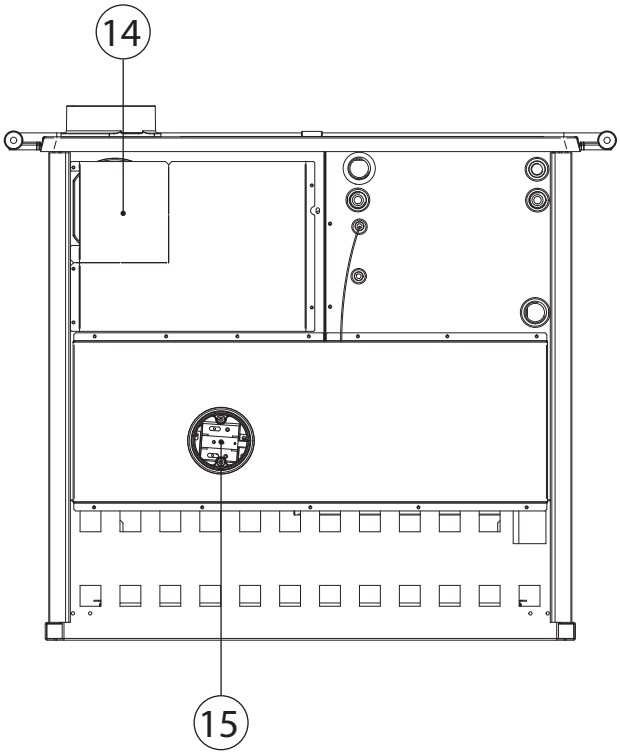


DETAILS TERMOROSA DSA.16 CERAMICA



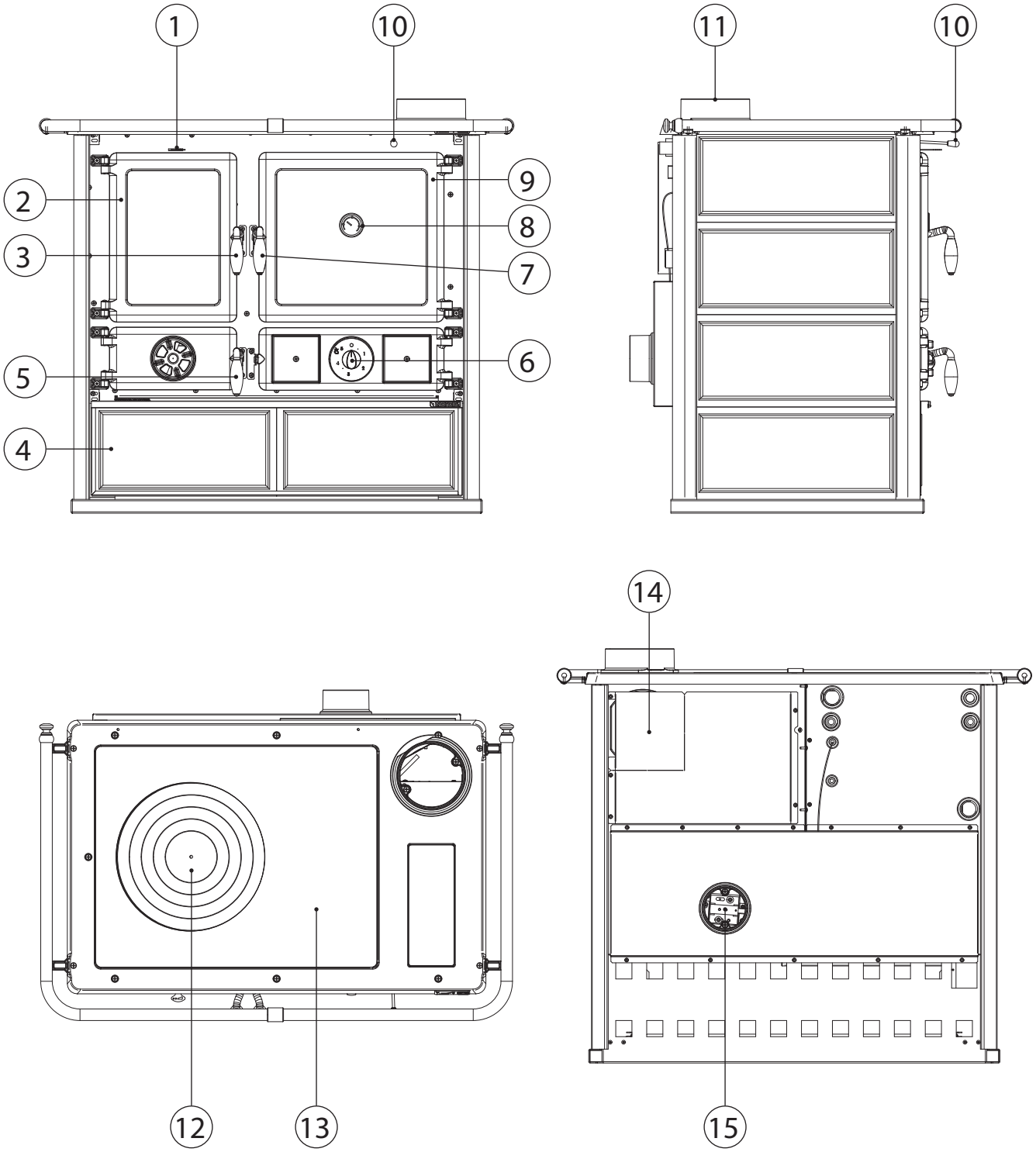






1	Secondary air damper	**6**	Automatic thermostat	**11**	Upper flue gas outlet
2	Firebox door	**7**	Food warmer door handle	**12**	Cast iron rings
3	Firebox door handle	**8**	Food warmer thermometer	**13**	Cast iron centre plate
4	Removable firewood drawer	**9**	Food warmer door	**14**	Rear flue gas outlet
5	Ash drawer door handle	**10**	Ignition damper	**15**	Fresh air intake

DETAILS TERMOROSA DSA.16 PETRA



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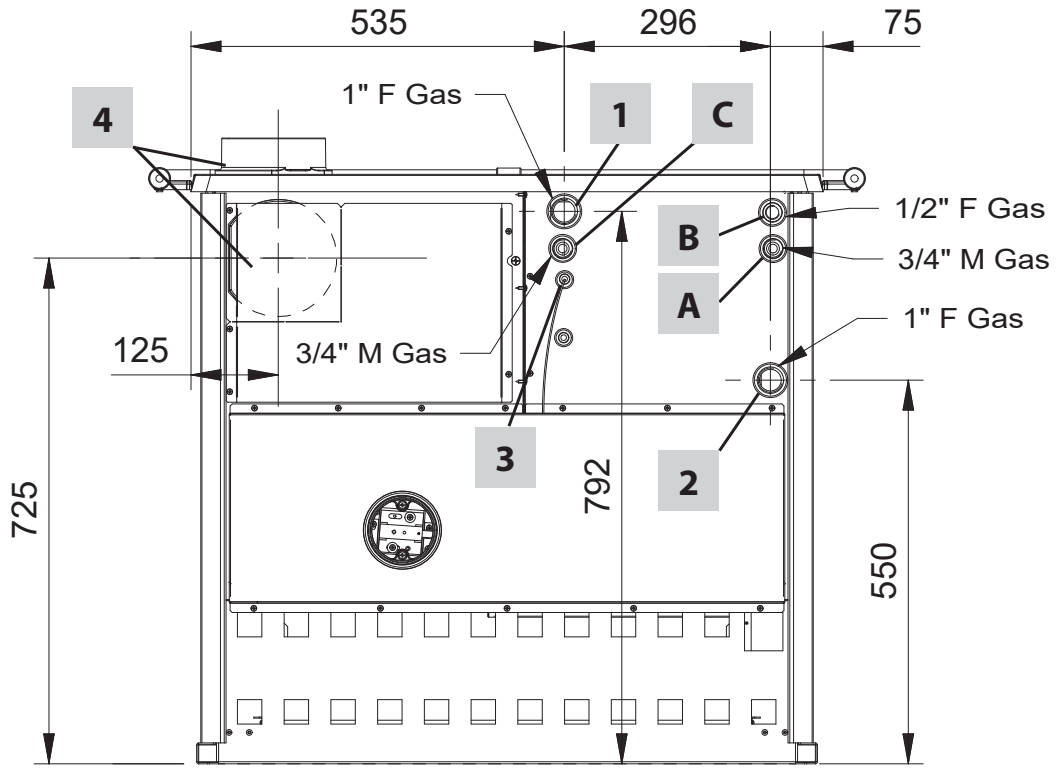
DETAILS OF PRODUCT HYDRAULIC SYSTEM CONNECTIONS

VAST



1	**Flow** Manifold	A	**INLET** integrated **DSA** system
2	**Return** Manifold	B	(VEC - **VAST** valve **probe**) - (VEA - Watertight cap)
3	Control **probe**	C	**OUTLET** integrated **DSA** system
4	**Smoke discharge**		

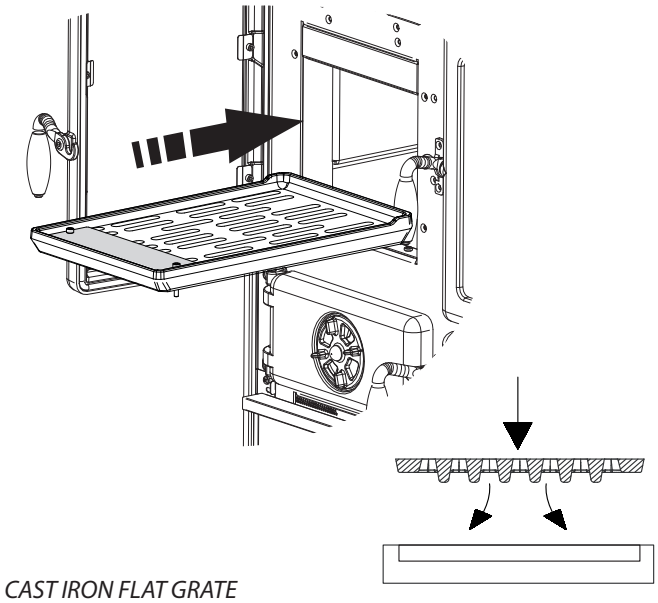
TECHNICAL DESCRIPTION

La NORDICA wood-burning products can be used to heat living spaces for limited periods or to support an insufficient central heating system. They are ideal for holiday apartments, homes used at the weekend, or for use as auxiliary heating throughout the year. Logs are used as fuel.
THIS IS AN INTERMITTENT COMBUSTION APPLIANCE.

The stove is made of galvanised steel sheets, enamelled cast iron and heat-radiating ceramic. The firebox is located inside the boiler, constructed from 5 mm thick steel and reinforced with welded studs. The heating system water circulates inside the boiler, absorbing the heat produced in the firebox.
A cast iron flat grate is located inside the firebox (see **Figure 7**).
The firebox features a panoramic door made of ceramic glass (resistant up to 750°C). This allows for a captivating view of the burning flames. This also prevents any possible escape of sparks and smoke.

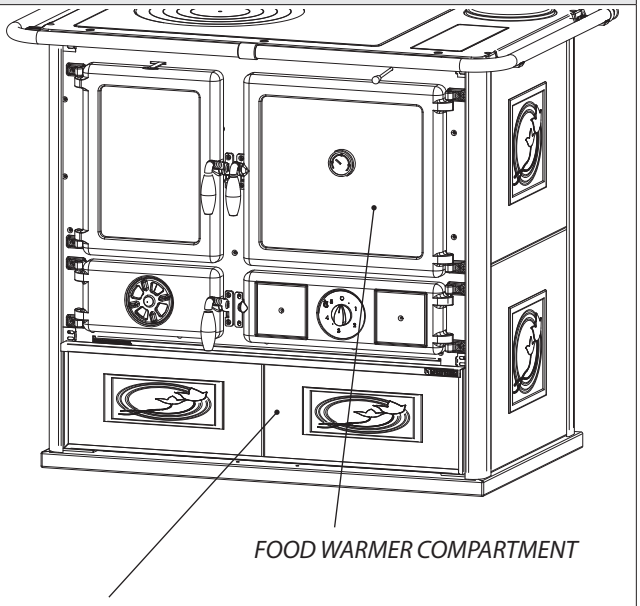
On the right-hand side of the stove there is a food warmer with a panoramic glass door and a temperature control thermometer; in the bottom section, there is a removable firewood drawer (see **Figure 8**).

Figure 7



CAST IRON FLAT GRATE

Figure 8



FOOD WARMER COMPARTMENT

REMOVABLE FIREWOOD DRAWER

THE ROOM IS HEATED:

A) ***BY RADIATION***: heat is radiated into the room through the panoramic glass and the hot external surfaces of the appliance.
B) ***BY CONDUCTION***: through the radiators or convectors of the central heating system powered by the hot water generated by the heating unit.

THE PRODUCT IS EQUIPPED WITH:
- A MANUAL SYSTEM to adjust the COMBUSTION AIR.
- An IGNITION DAMPER to optimise its use in stove (HOT PLATE USE-IGNITION) mode or stove (FOOD WARMER USE) mode.

2A - SECONDARY Air Damper (**Figure 9**).
The secondary air damper is located above the firebox door. This damper must be opened (therefore the lever moved to the right) especially during wood combustion, so that the unburnt carbon can undergo post-combustion, which increases performance and keeps the glass clean (see the OPERATION paragraph).

B - IGNITION Damper (**Figure 9**).
*Conversion from stove (**HOT PLATE USE-IGNITION**) mode to stove (**FOOD WARMER USE**) mode.*
The control lever for the ignition damper is located on the right-hand side at the front of the stove, between the protective handrail and the ***food warmer*** door, identifiable by a chrome knob. When the lever is pushed towards the back of the stove, the combustion gases pass beneath the cast iron plate and rings, heating them, before flowing towards the exhaust duct, in *stove* (**HOT PLATE USE-IGNITION**) mode.
When the lever is pulled towards oneself, the combustion gases flow all around the ***food warmer***, causing its internal temperature to rise evenly, in *stove* (**FOOD WARMER USE**) mode.

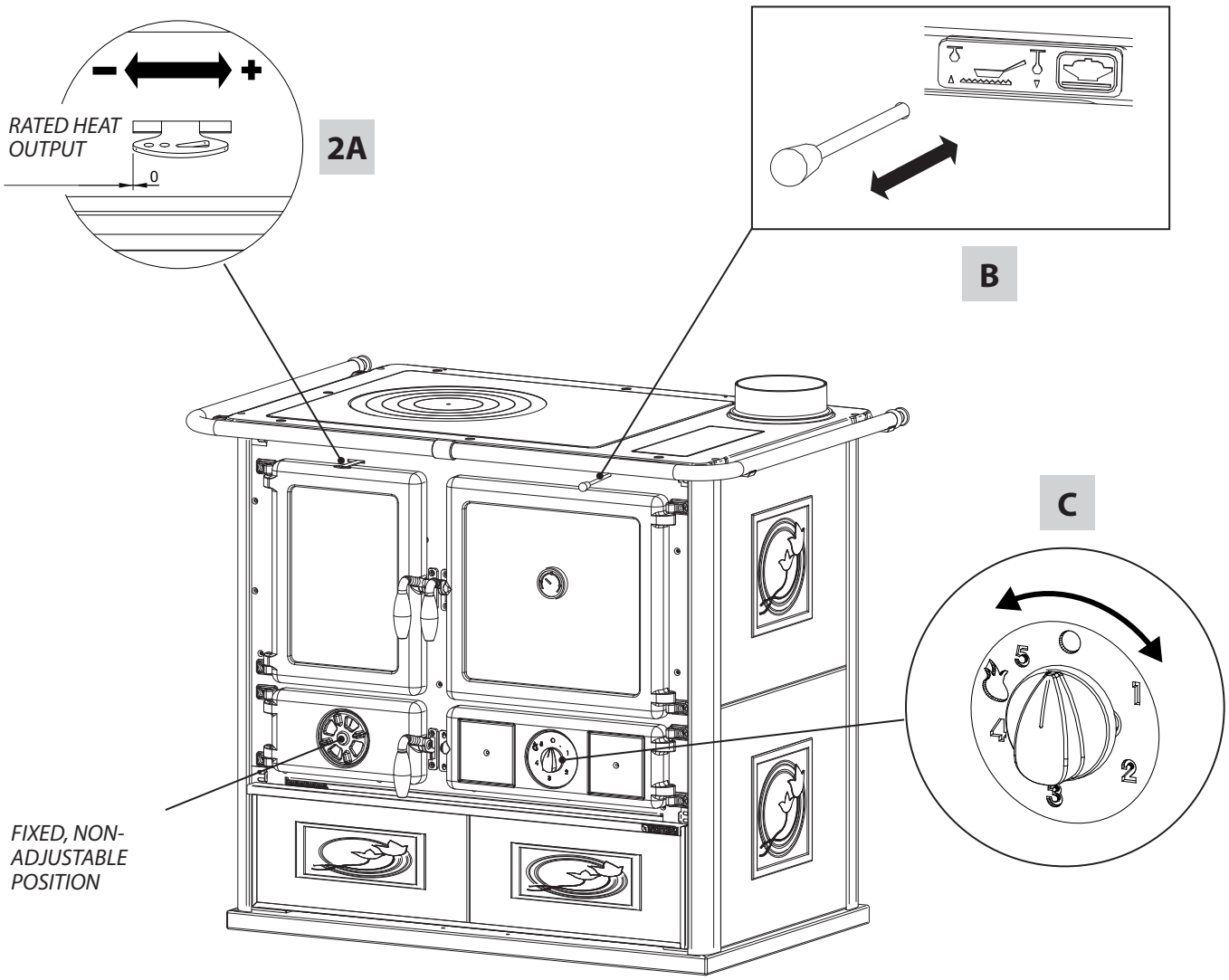
C - AUTOMATIC THERMOSTAT (**Figure 9**)

THE THERMOSTAT IS LOCATED BELOW THE FOOD WARMER DOOR, AND IS USED TO AUTOMATICALLY INCREASE OR DECREASE COMBUSTION.

Depending on the chosen position, the thermostat will act on the valve located at the back of the stove, which regulates the supply of combustion air to the product. Turn clockwise from 0 to 5 to revive the fire, and counter-clockwise from 5 to 0 to reduce combustion.

AS THIS IS A HIGH-PRECISION DEVICE, IT MUST BE TURNED CAREFULLY, WITHOUT EVER FORCING THE KNOB.

Figure 9



IGNITION

UNDER NO CIRCUMSTANCES SHOULD THE FIRE BE LIT BEFORE THE SYSTEM HAS BEEN COMPLETELY FILLED WITH WATER; DOING SO WOULD CAUSE VERY SERIOUS DAMAGE TO THE ENTIRE STRUCTURE. IF THERE IS A TOTAL OR PARTIAL LACK OF WATER, NEVER IGNITE THE FIRE IN THE STOVE (NOT EVEN FOR TESTING), AS THIS COULD CAUSE IRREPARABLE DAMAGE TO THE APPLIANCE AND IT WILL VOID THE WARRANTY.

AT THE FIRST IGNITION, AN UNPLEASANT ODOUR WILL INEVITABLY BE PRODUCED (DUE TO THE DRYING OF THE ADHESIVES IN THE SEALING GASKET OR THE PROTECTIVE VARNISH), WHICH DISAPPEARS AFTER A SHORT PERIOD OF USE. HOWEVER, GOOD VENTILATION OF THE ROOM MUST BE ENSURED.

WHEN IGNITING FOR THE FIRST TIME, IT IS RECOMMENDED TO LOAD A SMALL AMOUNT OF FUEL AND GRADUALLY INCREASE THE APPLIANCE'S THERMAL POWER; DURING THE INITIAL IGNITIONS, SIGNIFICANT CONDENSATION OF THE FLUE GASES MAY OCCUR, WITH A SMALL AMOUNT OF WATER COMING OUT OF THE STOVE; THIS IS NORMAL AND IT WILL SOON STOP; IF IT PERSISTS, THE FLUE DRAUGHT SHOULD BE CHECKED.

IT IS PROHIBITED TO USE LIQUIDS SUCH AS ALCOHOL, PETROL, PETROLEUM AND THE LIKE.
NEVER SWITCH ON THE APPLIANCE WHEN THERE ARE COMBUSTIBLE GASES IN THE ROOM.

When first igniting products treated with high-temperature paint, it is important to consider the following:

- the construction materials of the products in question are not homogeneous, in fact cast iron and steel parts coexist.
- the temperature distribution across the product's body is not uniform: different areas may reach temperatures ranging from 300°C to 500°C;
- over its lifetime, the product undergoes alternating cycles of ignition and shutdown within the same day, as well as periods of intense use or complete inactivity depending on the season;
- before being considered fully "broken in", a new product must go through several ignition cycles to allow all materials and the paint to adapt to thermal stress;
- during the initial ignitions, odours typical of metals exposed to high thermal stress and fresh paint curing, may be emitted.

Therefore, it is extremely important that the following precautions be taken during ignition:

1. Ensure a strong exchange of air in the room where the appliance is installed.
2. On first ignitions, do not overload the combustion chamber (about half the amount indicated in the instruction manual) and keep the product running for at least 6–10 hours continuously, with the dampers less open than indicated in the instruction manual.
3. Repeat this ignition process at least 4–5 times or more, depending on your availability.
4. Gradually increase the load (while adhering to the maximum load recommendations in the instruction manual) and aim for longer ignition periods. Avoid short ignition-shutdown cycles during this initial phase.
5. **During operation, no objects must be placed on the appliance, especially on the lacquered surfaces. The lacquered surfaces must not be touched during heating.**
6. Once the breaking-in period is complete, the product can be used like a car engine, avoiding sudden overheating with excessive loads.

DURING THE INITIAL IGNITIONS, SIGNIFICANT CONDENSATION OF THE FLUE GASES MAY OCCUR, WITH A SMALL AMOUNT OF WATER COMING OUT OF THE STOVE; THIS IS NORMAL AND IT WILL SOON STOP; IF IT PERSISTS, THE FLUE DRAUGHT SHOULD BE CHECKED.

PREPARING FOR IGNITION

To light the fire, we recommend using small wooden sticks and commercially available fire starters.

NEVER LEAVE THE FIREBOX UNATTENDED DURING THIS PROCEDURE.

LIGHT THE FIRE USING THE TRADITIONAL METHOD

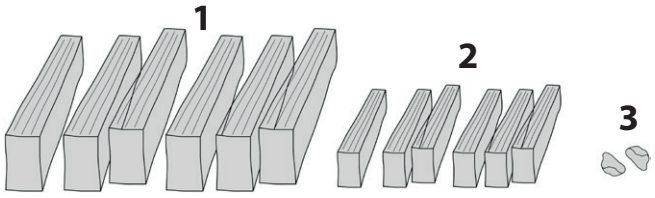
- Open the throttle valve, if present, on the flue pipe.
- Position the (IGNITION DAMPER B) with the lever pushed all the way in, stove (HOT PLATE USE-IGNITION) mode.
- Turn the (AUTOMATIC THERMOSTAT C) knob to position 5.
- Open the (SECONDARY AIR DAMPER 2A).
- After igniting the fire with small pieces of firewood and waiting for it to be well lit:
  - Close the butterfly valve, if present.
  - Turn the (AUTOMATIC THERMOSTAT C) to the position corresponding to the desired heat level (0-5).

The dampers must be adjusted during ignition as follows:

	2A - SECONDARY AIR	B - IGNITION DAMPER	C - AUTOMATIC THERMOSTAT
Figure 9	OPEN	HOT PLATE USE-IGNITION USE	POSITION 5

LIGHT THE FIRE USING THE METHOD FROM ABOVE (RECOMMENDED)

See **Figure A**:
- To light the fire, place the larger pieces of wood (**1**) at the bottom;
- On top of the larger pieces (1), arrange smaller pieces of wood (**2**);
- Place the FIRE STARTER (**3**) on the top of the stack of wood - this can be, for example, wax-coated wood wool;
- Light the fire starter (**3**). One match is enough to light the fire.



MAXIMUM PERMISSIBLE LOAD

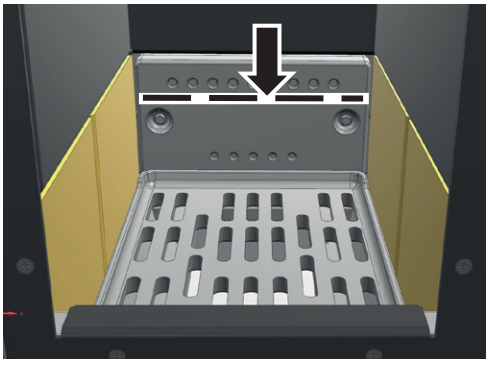
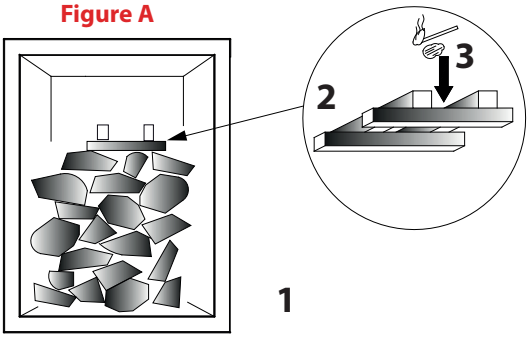


Figure A



After lighting the fire, position the dampers as indicated in the following table:

	2A - SECONDARY AIR	B - IGNITION DAMPER	C - AUTOMATIC THERMOSTAT
Figure 9	OPEN	HOT PLATE USE-IGNITION USE	POSITION 5

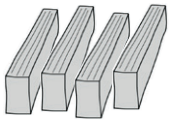
PROCEDURE TO ACHIEVE THE RATED HEAT OUTPUT

PREPARING THE BED OF EMBERS

FIRST LOAD:

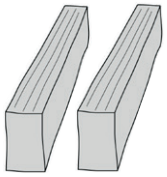
Use medium-sized pieces of wood (2) according to the hourly consumption specified in the document "CE MARKING INFORMATION".

Reload only when the flame is nearly extinguished.



SECOND LOAD:

Use large pieces of wood (1) according to the hourly consumption specified in the document "CE MARKING INFORMATION".



TO AVOID ESCAPING SMOKE, THERE SHOULD BE ONLY EMBERS WHEN THE FIREWOOD IS LOADED.

NEVER OVERLOAD THE APPLIANCE. TOO MUCH FUEL AND COMBUSTION AIR CAN CAUSE OVERHEATING AND THUS DAMAGE THE APPLIANCE. THE WARRANTY DOES NOT COVER DAMAGE DUE TO OVERHEATING OF THE APPLIANCE.

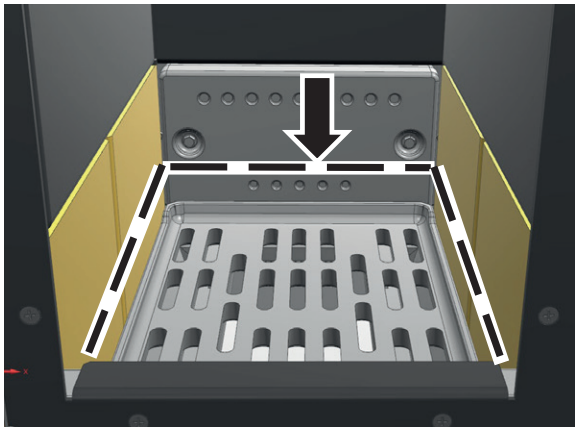
CAUTION: DO NOT EXCEED THE MAXIMUM FIREWOOD LOAD - SEE TECHNICAL DATA AND HOURLY CONSUMPTION IN THE DOCUMENT "CE MARKING INFORMATION".

IF THE WATER TEMPERATURE EXCEEDS THE SAFETY INTERVENTION LIMIT, IMMEDIATELY STOP ADDING WOOD AND CHECK THAT THE WATER TEMPERATURE AND FLAME DECREASE, ELIMINATING THE CAUSE OF OVERHEATING. CLOSE THE PRIMARY (1A) AND SECONDARY (2A) AIR DAMPERS. TURN THE (AUTOMATIC THERMOSTAT D) TO POSITION 0. TURN THE (FLUE GAS DAMPER C) TO THE LEFT (POT SYMBOL). PULL THE (IGNITION DAMPER B) LEVER OUT COMPLETELY: DAMPER OPEN.
IF THE STOVE IS CONNECTED TO A DOMESTIC HOT WATER SYSTEM, THE HOT WATER TAP CAN BE OPENED TO MAKE THE APPLIANCE COOL DOWN FASTER.

To achieve nominal operation, a bed of embers approximately 3cm high (20-25% of the nominal load) is required.

If the ember bed is excessive, first stir it with the poker to allow the ash to fall into the ash drawer, then use a metal shovel to remove the excess embers.

The embers must not exceed the reference shown in the figure opposite.



Before placing the firewood, fully open the primary air damper and, using the supplied poker, stir the embers to reignite them. Position the fire in the combustion chamber (see LOADING INSTRUCTIONS), close the door and wait up to 3 minutes for the flame to ignite, then adjust the dampers to achieve the rated heat output.
Loading takes approximately 48 minutes.

LOADING INSTRUCTIONS TO ACHIEVE THE RATED HEAT OUTPUT

No. logs	2
Nominal load weight	2.4 kg
Log length	27 cm
Positioning of the logs in the combustion chamber	The firewood should be placed approximately 8 cm from the edge (see Figure 10).
Log shape	(see Figure 11)

THE DAMPER ADJUSTMENT REQUIRED TO ACHIEVE THE RATED HEAT OUTPUT IS THE FOLLOWING:

	2A - SECONDARY AIR	B - IGNITION DAMPER	C - AUTOMATIC THERMOSTAT
Figure 9	1/2 OPEN	FOOD WARMER USE	POSITION 0

Loading is complete when, after loading, the combined weight of the ember and ash bed does not differ by more than 100g from the weight of the previous load.

THE USE OF THERMAL INSULATION ACCORDING TO ENERGY-SAVING REGULATIONS INCREASES THE HEATED VOLUME. IN THE CASE OF TEMPORARY HEATING WITH INTERRUPTIONS OF MORE THAN 8 H, THE HEATING CAPACITY DECREASES BY APPROXIMATELY 25%.

THE TECHNICAL DATA DECLARED IN THE DOCUMENT "CE MARKING INFORMATION" WERE OBTAINED USING BEECH WOOD ESSENCE OF CLASS "A1" AS PER STANDARD UNI EN ISO 17225-5 AND WITH HUMIDITY BELOW 20%. THE USE OF OTHER WOOD TYPES MAY REQUIRE SPECIFIC ADJUSTMENTS AND COULD RESULT IN DIFFERENT PRODUCT PERFORMANCE.

Position of logs

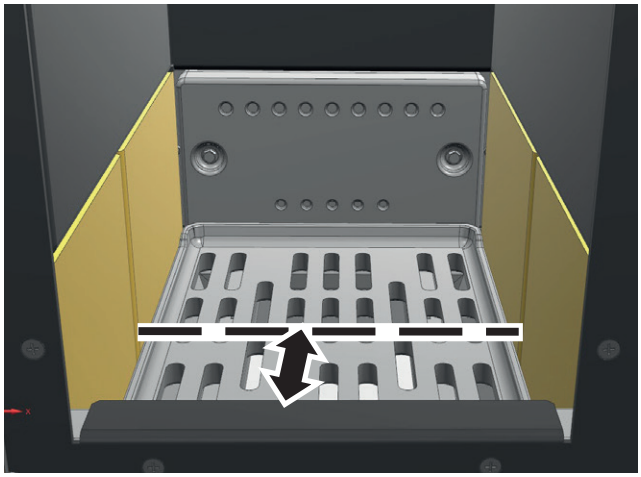


Figure 10

Log shape

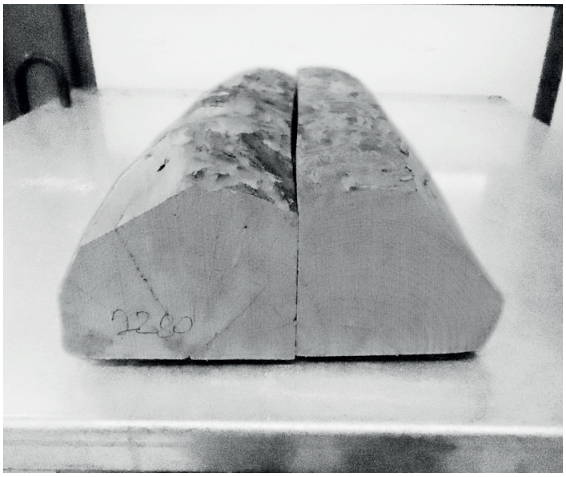


Figure 11

ALWAYS USE THE PRODUCT WITH THE DOOR CLOSED TO AVOID DAMAGE DUE TO OVERHEATING (FORGING EFFECT). FAILURE TO DO SO WILL INVALIDATE THE WARRANTY.

FOR SAFETY REASONS, THE FIREBOX DOOR MAY ONLY BE OPENED DURING FUEL LOADING. THE FIREBOX MUST REMAIN CLOSED DURING OPERATION AND PERIODS OF NON-USE.

IF THE WATER TEMPERATURE EXCEEDS THE SAFETY INTERVENTION LIMIT, IMMEDIATELY STOP ADDING WOOD: CLOSE THE SECONDARY AIR DAMPER (2A).

- **TURN THE (AUTOMATIC THERMOSTAT D) TO POSITION 0.**
- **PUSH THE (IGNITION DAMPER B) LEVER ALL THE WAY IN, (HOT PLATE USE-IGNITION) MODE.**

MONITOR THE DECREASE OF WATER TEMPERATURE AND FLAME, ELIMINATING THE CAUSES OF OVERHEATING.
IF THE STOVE IS CONNECTED TO A DOMESTIC HOT WATER SYSTEM, THE HOT WATER TAP CAN BE OPENED TO MAKE THE APPLIANCE COOL DOWN FASTER.

OVERLOADING THE STOVE WITH WOOD MAY RESULT IN THE OVERHEATING OF THE INTERNAL COMPONENTS AND GENERATE NOISES DUE TO THE METAL PARTS EXPANDING.

NEVER OVERLOAD THE APPLIANCE. TOO MUCH FUEL AND COMBUSTION AIR CAN CAUSE OVERHEATING AND THUS DAMAGE THE APPLIANCE. DAMAGE CAUSED BY OVERHEATING IS NOT COVERED BY WARRANTY. ALWAYS USE THE PRODUCT WITH THE DOOR CLOSED TO AVOID DAMAGE DUE TO OVERHEATING (FORGING EFFECT).

IN ADDITION TO THE COMBUSTION AIR ADJUSTMENT, THE COMBUSTION INTENSITY AND THEREFORE THE HEAT OUTPUT IS AFFECTED BY THE CHIMNEY. A HIGH CHIMNEY DRAUGHT REQUIRES LESS COMBUSTION AIR, WHILE A LOW DRAUGHT REQUIRES MORE COMBUSTION AIR.

To check for efficient combustion, observe the smoke coming from the chimney – it should be clear. If it is white, it means that the appliance is not properly adjusted or the firewood is too wet; if, on the other hand, the smoke is grey or black, it is a sign that combustion is not complete (more secondary air is needed).

WHEN ADDING FUEL ONTO EMBERS IN THE ABSENCE OF FLAMES, A HIGH LEVEL OF SMOKE MAY BE PRODUCED. IF THIS OCCURS, AN EXPLOSIVE MIXTURE OF GAS MAY FORM, WHICH, IN EXTREME CASES, COULD LEAD TO AN EXPLOSION. FOR SAFETY REASONS, A NEW IGNITION PROCEDURE SHOULD BE PERFORMED USING SMALL STRIPS.

USING THE FOOD WARMER (WHERE PRESENT)

When the (ignition damper B) is set to stove (FOOD WARMER USE) mode, the combustion gases flow over and around the food warmer, heating it.
The temperature of the food warmer can be significantly affected by the intake of combustion air. Sufficient chimney draught and well-cleaned ducts for the flow of hot fumes around the food warmer are essential for optimal heating performance.
Thick cakes and large roasts must be inserted on the bottom level. Flat cakes and biscuits go on the middle level. The top level can be used for heating or browning.
The food warmer pan and the grate can be placed on different levels (see the chapter "Technical Description - ACCESSORIES).

WHEN WARMING UP VERY MOIST FOODS, CAKES WITH FRUIT OR FRUIT ITSELF, CONDENSATE IS PRODUCED.
DURING THIS PHASE, AQUEOUS VAPOUR MAY FORM, WHICH IS THEN DEPOSITED ON THE TOP OR SIDE OF THE DOOR, FORMING CONDENSATE DROPLETS. THIS IS A NATURAL PHENOMENON.

By briefly and carefully opening the door (once or twice, more often if the heating times are longer), the vapour can be released from the food warmer, significantly reducing the formation of condensate.

POWER FAILURE

In the event of a sudden power outage during normal system operation, it will be necessary to perform the following simple operations to prevent the heating unit from boiling due to the pump not working.

1. Close the secondary air damper (2A).
2. Turn the (AUTOMATIC THERMOSTAT D) to position 0.
3. Push the (IGNITION Damper B) lever all the way in, stove (HOT PLATE USE-IGNITION) mode, to facilitate the evacuation of combustion gases.

OPERATION AT HIGH OUTSIDE TEMPERATURES

If the outside temperature is significantly higher than that of the installation room, the draught may be insufficient to fully expel the fumes, potentially resulting in a strong gas odour.
In this case, try reducing the fuel load to promote faster combustion (flame development) and restore proper draught.

ALSO CHECK THE AIRTIGHTNESS OF ALL OPENINGS FOR FLUE CLEANING AND CONNECTIONS. IN IN DOUBT, DO NOT OPERATE THE PRODUCT.

Under all conditions, including the presence of extractor hoods and/or controlled forced ventilation systems, the pressure difference between the rooms where the heater is installed and the outside must always be ≥ -4 Pa (e.g. -3 Pa is an acceptable value).

CAUTION: UNDER NO CIRCUMSTANCES SHOULD THE FIRE BE LIT BEFORE THE SYSTEM HAS BEEN COMPLETELY FILLED WITH WATER; DOING SO WOULD CAUSE VERY SERIOUS DAMAGE TO THE ENTIRE STRUCTURE. THE SYSTEM MUST BE KEPT CONSTANTLY FILLED WITH WATER, EVEN DURING PERIODS WHEN THE HEATING UNIT IS NOT IN USE. DURING THE WINTER PERIOD, SHOULD THE APPLIANCE NOT BE USED, ANTIFREEZE SUBSTANCES MUST BE ADDED.

TO FIND OUT WHERE YOUR NEAREST SERVICE CENTRE IS, CONTACT YOUR DEALER OR VISIT THE WEBSITE:
WWW.LANORDICA-EXTRAFLAME.COM

MAINTENANCE AND CARE

FOLLOW ALL THE INSTRUCTIONS WITH MAXIMUM SAFETY!

- ENSURE THE POWER CORD (WHERE PRESENT) IS UNPLUGGED.
- THAT THE HEATER AND ALL ITS PARTS HAVE COOLED.
- THAT THE ASHES HAVE FULLY COOLED.
- ENSURE EFFICIENT AIR EXCHANGE IN THE ROOM WHEN CLEANING THE PRODUCT.
- POOR CLEANING NEGATIVELY AFFECTS THE PERFORMANCE AND SAFETY OF THE PRODUCT!

REGULAR CLEANING UNDER THE 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 regularity described herein.

CHECK AND CLEAN THE FRESH AIR INTAKE AT LEAST ONCE A YEAR. THE CHIMNEY MUST BE REGULARLY SWEPT BY THE CHIMNEY SWEEP. HAVE YOUR LOCAL CHIMNEY SWEEP CHECK THE PROPER INSTALLATION OF THE PRODUCT, CONNECTION TO THE CHIMNEY AND VENTILATION

CLEANING AND MAINTENANCE MUST ONLY BE PERFORMED WHEN THE APPLIANCE IS COLD. USE ONLY SPARE PARTS EXPRESSLY AUTHORISED AND SUPPLIED BY LA NORDICA S.P.A. PLEASE CONTACT YOUR SPECIALISED RETAILER IF YOU REQUIRE SPARE PARTS. NO CHANGES MUST BE MADE TO THE APPLIANCE!!!

CLEANING THE GLASS

A specific secondary air inlet effectively slows down the formation of dirt deposits on the door glass. However, such deposits can never be avoided with the use of solid fuels (e.g. damp firewood) and are not to be regarded as a defect of the appliance .

THE PANORAMIC GLASS MUST ONLY BE CLEANED WHEN THE APPLIANCE IS COLD TO PREVENT IT FROM EXPLODING. FOR CLEANING, SPECIFIC PRODUCTS CAN BE USED OR, IT IS POSSIBLE TO USE A SCRUNCHED UP BALL OF NEWSPAPER (NON-COATED PAPER) SLIGHTLY MOISTENED AND DIPPED IN THE ASH. HOWEVER, DO NOT USE ABRASIVE OR CHEMICALLY AGGRESSIVE CLOTHS OR PRODUCTS.

Proper ignition, the right type and amount of fuel, the correct setting of the secondary air damper, a suitable chimney draught and steady supply of combustion air are all essential for the optimal performance of the appliance and in keeping the glass clean.

GLASS BREAKAGE: THE GLASS PANELS INSTALLED ARE MADE OF GLASS-CERAMIC, DESIGNED TO WITHSTAND TEMPERATURES UP TO 750°C.

THANKS TO THESE CHARACTERISTICS, THEY ARE NOT SUBJECT TO BREAKAGE CAUSED BY THERMAL SHOCK DURING THE NORMAL OPERATION OF THE APPLIANCE.

ANY BREAKAGE CAN OCCUR ONLY AS A RESULT OF MECHANICAL IMPACTS, SUCH AS, FOR EXAMPLE: DIRECT IMPACTS ON THE GLASS, SLAMMING THE DOOR VIOLENTLY, ETC.

PLEASE NOTE THAT THIS KIND OF DAMAGE IS NOT COVERED BY THE WARRANTY.

CLEANING THE ASH DRAWER

All products have a firebox grate and ash drawer (**Figure 12**). We recommend that you periodically empty the ash drawer and avoid filling it completely, so as not to overheat the grate. Moreover, it is suggested to always leave 3-4 cm of ash in the firebox.

CAUTION: THE ASHES REMOVED FROM THE FIREBOX MUST BE STORED IN A CONTAINER MADE OF FIREPROOF MATERIAL FITTED WITH AN AIRTIGHT COVER. THE CONTAINER MUST BE PLACED ON A FIREPROOF FLOOR, AWAY FROM FLAMMABLE MATERIALS UNTIL THE ASH IS EXTINGUISHED AND FULLY COOLED.

CLEANING THE FLUE

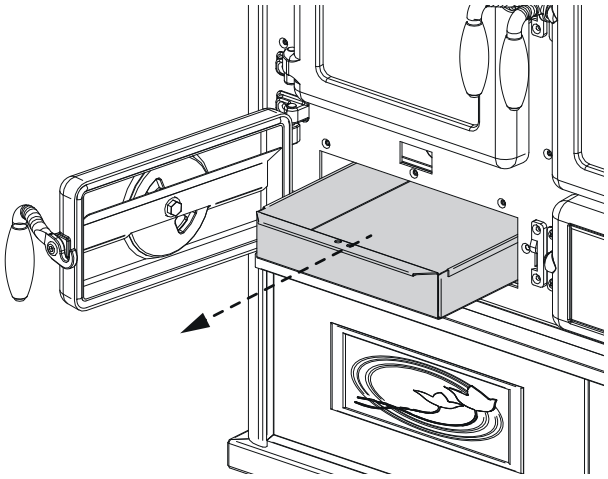
Proper ignition, the right type and amount of fuel, the correct setting of the secondary air damper, a suitable chimney draught and steady supply of combustion air are all essential for the optimal performance of the appliance and in keeping the glass clean. **THE APPLIANCE SHOULD BE THOROUGHLY CLEANED AT LEAST ONCE A YEAR OR WHENEVER REQUIRED (IN CASE OF POOR PERFORMANCE AND LOW OUTPUT). EXCESSIVE SOOT (CREOSOTE) DEPOSITS CAN LEAD TO PROBLEMS IN THE FLUE EXHAUST AND TO FLUE FIRES.**

CLEANING MUST ONLY BE CARRIED OUT WHEN THE APPLIANCE IS COLD. THIS PROCEDURE SHOULD BE CARRIED OUT BY A CHIMNEY SWEEP, WHO CAN PERFORM AN INSPECTION AT THE SAME TIME.

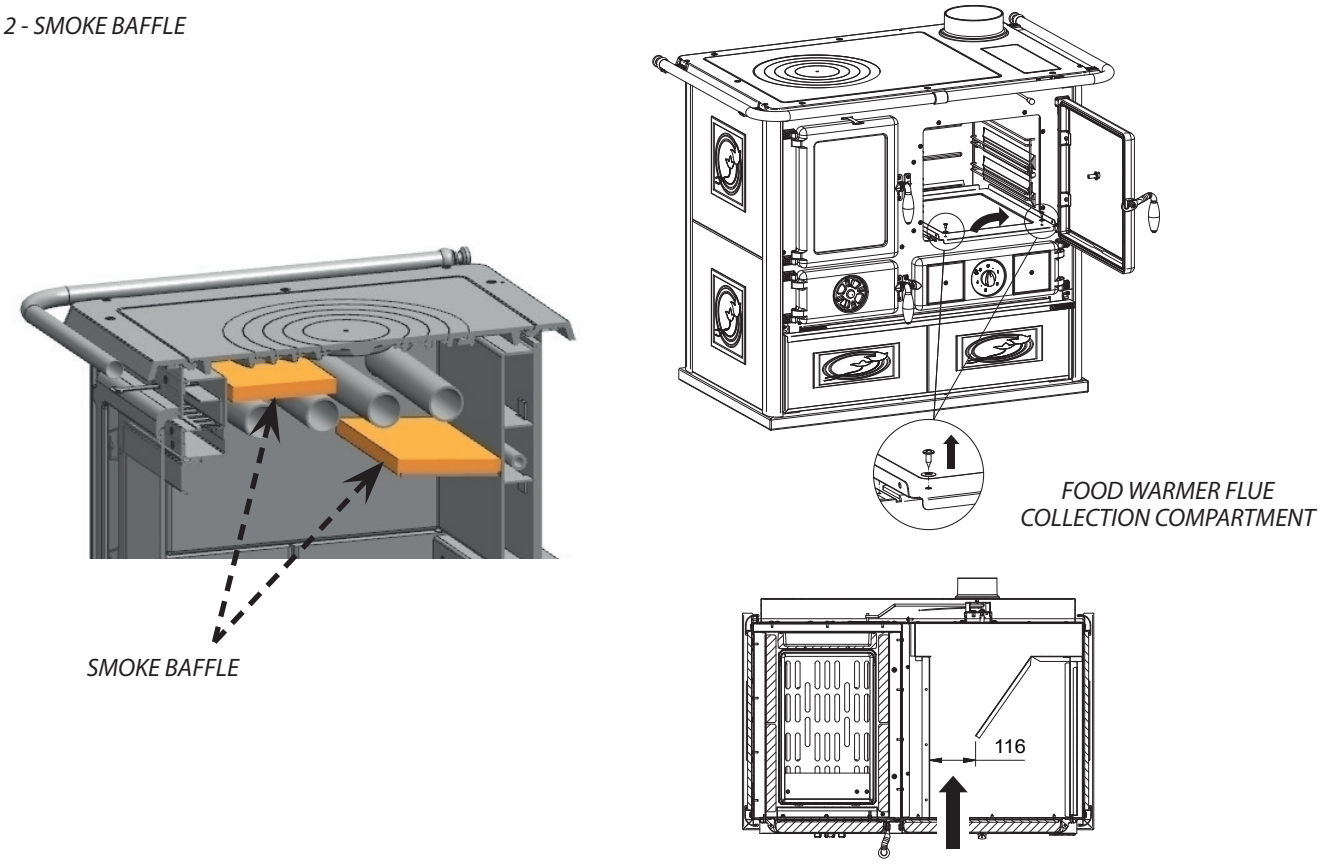
When cleaning, it is necessary to remove the ash drawer (1) (**Figure 12**) and the smoke baffle (2) to allow for proper soot removal. The baffles can be easily extracted from their seats since they are not fastened using screws. When cleaning is complete, they must be replaced in their seats.

Figure 12

1 - ASH DRAWER



2 - SMOKE BAFFLE



THE ABSENCE OF THE SMOKE BAFFLE CAUSES A STRONG VACUUM WITH EXCESSIVELY RAPID COMBUSTION, EXCESSIVE FIREWOOD CONSUMPTION AND RELATIVE OVERHEATING OF THE APPLIANCE.

MAJOLICA (IF PRESENT)

LA NORDICA S.p.A. majolica tiles are the result of high-quality craftsmanship and as such may present micro-crackling, crazing or colour imperfections. These characteristics attest to its high-quality nature. Enamel and majolica, due to their varying expansion coefficients, produce micro-crackling (crazing) that demonstrate their authenticity.

WHEN CLEANING THE TILES, IT IS RECOMMENDED TO USE A SOFT, DRY CLOTH; IF ANY DETERGENT OR LIQUID IS USED, THIS MAY PENETRATE INTO THE CAVITIES AND PERMANENTLY EXPOSE THEM.

NATURAL STONE PRODUCTS (IF PRESENT)

NATURAL STONE IS CLEANED WITH VERY FINE SANDPAPER OR ABRASIVE SPONGE. **DO NOT** USE DETERGENTS OR LIQUIDS.

PAINTED PRODUCTS (IF PRESENT)

After years of using the product, colour changes of painted parts is a completely natural phenomenon. This phenomenon is due to the considerable temperature variations to which the product is subject when it is in operation and to the ageing of the paint itself over time.

BEFORE THE APPLICATION OF NEW PAINT, ANY RESIDUE MUST BE CLEANED AND REMOVED FROM THE SURFACE TO BE PAINTED.

ENAMELLED PRODUCTS (IF PRESENT)

To clean the enamelled parts, use soapy water or a neutral, **NON-ABRASIVE, NON-CHEMICALLY AGGRESSIVE DETERGENT**, at a cold temperature.

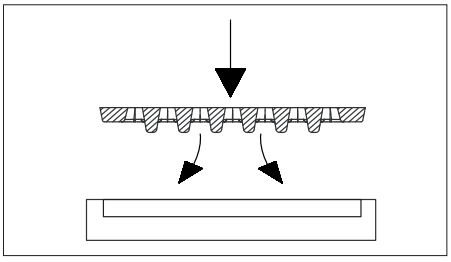
AFTER CLEANING, DO NOT LEAVE THE SOAPY WATER OR DETERGENT TO DRY – REMOVE THEM IMMEDIATELY. DO NOT USE SANDPAPER OR STEEL WOOL.

CHROME-PLATED COMPONENTS (IF PRESENT)

If the chrome-plated components turn bluish due to overheating, this can be resolved using a suitable cleaning product.

CLEANING THE FIREBOX GRATE

IMPORTANT: If for any reason the grate is removed from the firebox, it is IMPORTANT, when replacing it, that the flat part with the narrower ash passages be facing upwards; failure to do so would make it difficult to remove the ash from the grate (see figure opposite).



SIDE HANDRAIL (IF PRESENT)

The handles, handrail and water tray (stoves) must be cleaned with a soft cloth and some alcohol, when cooled.
DO NOT use abrasives or thinners.

CAST IRON CENTRE PLATE AND RINGS

IMPORTANT: TO PREVENT THE FORMATION OF RUST, DO NOT LEAVE POTS AND PANS ON THE COLD COOKING PLATE. THIS COULD CAUSE UNSIGHTLY AND HARD-TO-REMOVE RUST STAINS! THE CAST IRON CENTRE PLATE (CAST IRON COOKING PLATE) AND THE CAST IRON RINGS MUST BE PERIODICALLY SANDED WITH 150-GRIT SANDPAPER ATTENTION: DO NOT SAND THE ENAMELLED PARTS.

During cleaning, the flue gas exhaust stub and flue gas pipe must be detached from the stove. The flue gas compartment can be cleaned from the front of the oven (see chapter: CLEANING THE OVEN FLUE GAS PASSAGE), or from the top. To this end, remove the rings and cooking plate and detach the flue gas pipe from the exhaust stub. Cleaning can be performed using a brush and vacuum cleaner.

CAUTION AFTER CLEANING, ALL DISASSEMBLED PARTS MUST BE REASSEMBLED IN AN AIRTIGHT MANNER.

STAINLESS STEEL FRAME (IF PRESENT)

When repositioning the cast iron cooking plate, check that there is always a 3 mm gap between it and the stainless steel frame to allow for different thermal expansions and to prevent colour alterations to the stainless steel frame during heating.

PERFORMING MAINTENANCE ON THE FOOD WARMER (IF PRESENT)

TO PREVENT THE FORMATION OF RUST, IT IS RECOMMENDED TO:

- Release the steam from the food warmer to reduce the formation of any condensate, briefly and carefully opening the door;
- Remove the food from the food warmer once heated. Leaving the food to cool inside the food warmer may result in the formation of condensate;
- Leave the food warmer door open to dry up any condensate;
- If moisture forms inside the food warmer, it is advisable to apply neutral petroleum jelly to the inside of the cast iron door (**where present**).
- If rust has formed on the inner side of the cast iron door, remove it using an abrasive material (150-grit sandpaper), then treat the cast iron surface with neutral petroleum jelly.
- Repeat the neutral petroleum jelly treatment on the inside of the cast iron door every 3–6 months depending on how often the food warmer is used;

CLEANING THE FOOD WARMER FLUE COLLECTION COMPARTMENT

The flue collection compartment can be cleaned by removing the base of the food warmer, which is secured with dedicated screws (**Figure 12 pos.2**).
To clean the flue collection compartment in the top part of the food warmer, remove the rings and, if necessary, also remove the centre plate, after dismantling the flue gas exhaust duct.
Cleaning can be performed using a brush and vacuum cleaner.

IMPORTANT: CHECK THAT THE SMOKE BAFFLE IS POSITIONED AS SHOWN IN THE FIGURE.

CAUTION: AFTER CLEANING, ALL DISASSEMBLED PARTS MUST BE REASSEMBLED IN AN AIRTIGHT MANNER.

HYDRAULIC SYSTEM MAINTENANCE

AN EXCESSIVE BUILD-UP OF DEPOSITS ON THE INTERNAL WALLS OF THE FIREBOX SIGNIFICANTLY REDUCES THE EFFICIENCY OF HEAT EXCHANGE; THEREFORE, WHEN NECESSARY, ANY DEPOSITS SHOULD BE REMOVED USING A STEEL SPATULA.
NEVER USE CORROSIVE SUBSTANCES THAT COULD DAMAGE THE HEATING UNIT AND THE BOILER.

WITH THE SYSTEM SWITCHED OFF, ONCE A YEAR, CARRY OUT THE FOLLOWING CHECKS:

- Check the functionality and efficiency of the thermal relief and safety valves. IF THEY ARE FAULTY, CONTACT THE AUTHORISED INSTALLER. **IT IS STRICTLY PROHIBITED TO REMOVE OR TAMPER WITH THESE SAFETY DEVICES**.
- Check the thermal insulation of the filling pipe and the safety pipe.
- Ensure that the system is filled and pressurised. Check the water level inside the expansion vessel and test its functionality, also making sure of the efficiency of the safety pipe.

SUMMER SHUTDOWN

After cleaning the firebox, chimney and flue, ensuring that all ash and any other residue have been removed, all doors and relative firebox dampers should be closed. If the appliance is disconnected from the chimney, the outlet hole should be closed.

IT IS ADVISABLE TO CLEAN THE FLUE AT LEAST ONCE A YEAR; AT THE SAME TIME CHECK THE ACTUAL CONDITION OF THE GASKETS, WHICH, IF NOT PERFECTLY INTACT - I.E. NO LONGER ADHERING TO THE PRODUCT - WOULD NOT GUARANTEE THE PROPER FUNCTIONING OF THE APPLIANCE! REPLACEMENT WOULD THEREFORE BE NECESSARY.

IF THE APPLIANCE IS INSTALLED IN A DAMP ROOM, PLACE ABSORBENT SALTS INSIDE THE FIREBOX. TO PRESERVE THE APPEARANCE OF THE APPLIANCE OVER TIME, PROTECT CAST-IRON PARTS WITH NEUTRAL VASELINE.

CHECK THE WATER LEVEL IN THE EXPANSION VESSEL AND RELEASE ANY AIR FROM THE SYSTEM BY BLEEDING THE RADIATORS. ALSO CHECK THE FUNCTIONALITY OF THE HYDRAULIC AND ELECTRICAL ACCESSORIES (CONTROL UNIT, CIRCULATING PUMP).

CAUTION: UNDER NO CIRCUMSTANCES SHOULD THE FIRE BE LIT BEFORE THE SYSTEM HAS BEEN COMPLETELY FILLED WITH WATER; DOING SO WOULD CAUSE VERY SERIOUS DAMAGE TO THE ENTIRE STRUCTURE. THE SYSTEM MUST BE KEPT CONSTANTLY FILLED WITH WATER, EVEN DURING PERIODS WHEN THE HEATING UNIT IS NOT IN USE.

TO FIND OUT WHERE YOUR NEAREST SERVICE CENTRE IS, CONTACT YOUR DEALER OR VISIT THE WEBSITE:
WWW.LANORDICA-EXTRAFLAME.COM

ROUTINE MAINTENANCE PERFORMED BY QUALIFIED TECHNICIANS

ROUTINE MAINTENANCE MUST BE PERFORMED AT LEAST ONCE A YEAR.
SINCE THE HEATER USES FIREWOOD AS A SOLID FUEL, ANNUAL ROUTINE MAINTENANCE IS REQUIRED, WHICH MUST BE CARRIED OUT BY A QUALIFIED TECHNICIAN, USING ONLY ORIGINAL SPARE PARTS.

FAILURE TO COMPLY MAY JEOPARDISE SAFETY OF THE APPLIANCE AND INVALIDATE THE WARRANTY CONDITIONS.

Observing the cleaning frequencies reserved for the user as described in the use and maintenance manual will ensure the heater's proper combustion over time, avoiding any anomalies and/or malfunctions that could require additional call-outs.
REQUESTS FOR ROUTINE MAINTENANCE ARE NOT COVERED BY THE PRODUCT WARRANTY.

GASKETS

The gaskets ensure the airtightness and proper functioning of the product.
THEY MUST BE REGULARLY CHECKED. THEY MUST BE REPLACED IMMEDIATELY IF THEY ARE WORN OR DAMAGED.
THESE OPERATIONS MUST BE PERFORMED BY A QUALIFIED TECHNICIAN.

CONNECTION TO THE CHIMNEY

ANNUALLY, OR WHENEVER THE DUCT LEADING TO THE CHIMNEY NEEDS TO BE VACUUMED AND CLEANED. IF THERE ARE HORIZONTAL SECTIONS, REMOVE ANY RESIDUE BEFORE IT OBSTRUCTS THE PASSAGE OF SMOKE.

EN 16510-1 Symbol	EXPLANATION
nom	Nominal heat output
part	Part load heat output
CON / INT	Appliance operation, Continuos (CON) or Intermittent (INT)
$CO_{2\,nom}$ / $CO_{2\,part}$	Carbon dioxide emission
CO_{nom} / CO_{part}	Carbon monoxide emission
d_B	Minimum distances to combustible materials - bottom
d_C	Minimum distances to combustible materials - ceiling
d_F	Minimum distances to combustible materials - floor in front
d_L	Minimum distances to combustible materials - side radiation area
d_{non}	Minimum distances to non-combustible walls
d_{out}	Flue gas exhaust pipe
d_P	Minimum distances to adjacent combustible materials - front
d_R	Minimum distances to combustible materials - rear
d_S	Minimum distances to combustible materials - side
E, f	Power supply voltage, frequency
EEI	Energy Efficiency Index
el_{max}	Consumption of electrical auxiliary energy at nominal heat output
el_{min}	Consumption of electrical auxiliary energy at part load heat output
el_{SB}	Consumption of electrical auxiliary energy at standby
H	Appliance height overall
L	Appliance depth overall
m	Net weight
m_{chim}	Maximum load of a chimney the appliance max carry
$m_{h\,nom}$ / $m_{h\,part}$	Hourly consumption
$NO_{x\,nom}$ / $NO_{x\,par}$	Nitrogen oxides emission
OGC_{nom} / OCG_{part}	Emission of organic gaseous carbon
PM_{nom} / PM_{part}	Particulate matter emissions
P_{nom} / P_{part}	Heat output
p_{nom} / p_{part}	Minimum flue draught
$P_{SH\,nom}$ / $P_{SH\,part}$	Space heat output
p_W	Permissible maximum water operating pressure
$P_{W\,nom}$ / $P_{W\,part}$	Water heat output
s	Thickness of the protective insulation material
T_{class}	Chimney designation
$T_{f.g\,nom}$ / $T_{f.g\,part}$	Mean flue gas temperature
$T_{s\,nom}$ / $T_{s\,part}$	Flue gas outlet temperature
W	Appliance width overall
W_{max}	Maximum electric power input
η_{nom} / η_{part}	Efficiency
η_S	Seasonal space heating efficiency at nominal heat output
$\Phi_{f.g\,nom}$ / $\Phi_{f.g\,part}$	Flue gas mass flow
Wood Pellet (L)	Wood Pellet
Wood Logs (l)	Wood Logs
	Read and follow the user operating instructions

Riscalda la vita.

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MADE IN ITALY
design & production

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