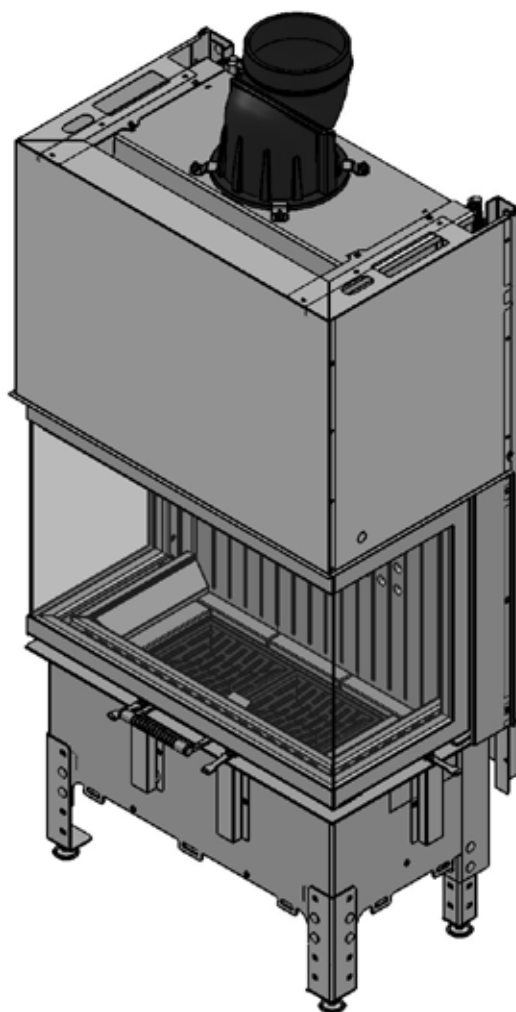




PRODUCER OF FIREPLACES

OPERATING AND ASSEMBLY MANUAL

Convection Fireplace **TRINITY**



In accordance with the requirements of the Ecodesign Directive on the territory of EU member states:
„This product cannot be used as a primary heating source.”

www.hitze.pl

Dear Customer,

Thank you for purchasing Hitze product!



BEFORE FIRST USE, IT IS **ESSENTIAL TO READ THE OPERATING
AND INSTALLATION INSTRUCTIONS IN FULL** AND **CHECK THE
COMPLETENESS OF THE PRODUCT.**

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1. INTRODUCTORY INFORMATION

Warmth from Nature– these words perfectly illustrate the Hitze brand philosophy. In accordance with it, we produce fireplaces and stoves that are heated with wood or wood pellets, that is, raw materials that are the least harmful to the environment. Thanks to new technology, we have created innovative solutions that are characterized by modern design and high heating efficiency.

We wish you trouble-free operation and lots of warmth!

Before installing the fireplace and connecting it to the chimney installation, it is essential to read the instructions for use and installation and to check the completeness of the components.

The information contained in the Operation and Installation Manual will ensure the proper operation of the fireplace and avoid damage and mishaps caused by improper use.

If you have any doubts or problems with operation, please contact the point of sale or the Manufacturer.

NOTES:

The device must not be used by children.

Never leave children or pets unattended near a burning or just extinguished fireplace.

Danger of burns (hearth parts can be very hot).

In order to improve the product, the Manufacturer reserves the right to make changes in the drawings, photos and descriptions, as well as in the parameters of the equipment without notice and at any time. It is forbidden to copy in whole or in part the Operation and Installation Manual without authorization from the Manufacturer. Keep the Operating and Installation Manual out of the reach of children.

In case of destruction, loss or damage of the Operation and Installation Manual, you should apply for a copy of it to the point of sale or to the Manufacturer, providing the identification data of the device.

1.1. General Information

Security

Adherence to the following rules will enable the proper operation of the fireplace, avoid damage and accidents caused by improper use.

1.2. To maintain the necessary safety rules:

- read the Operation and Installation Manual with understanding before installing or maintaining the fireplace;
- Install the fireplace in the most convenient place while taking into account the current building and fire protection laws;
- installation, maintenance and inspection of the operation of the installation be performed by qualified professionals;
- use the device for its intended purpose;
- in the place of installation of the fireplace absolutely ensure adequate ventilation and air supply;
- place the clothes dryer at a minimum distance of 1.5m from the fireplace (fire hazard);
- check the permissible load on the substrate (floor, ceiling) in the planned location of the fireplace (taking into account the total weight of the appliance including its installation);
- provide a suitable chimney installation that guarantees safe use (e.g., a chimney made of noncombustible materials that absorb heat poorly);
- avoid installing the fireplace in rooms with B-gas appliances, hoods (with and without exhaust), heat pumps, collective ventilation ducts, numerous operating smoke ducts, as well as in close proximity to stairwells and rooms with appliances that can create negative pressure;

- avoid direct contact with the fireplace (the device during operation is heated to high temperatures) and, if necessary, use appropriate protective measures (clothing, heat-resistant gloves);
- Install the fireplace in rooms with fire protection, equipped with fresh air supply and exhaust;
- If any difficulties arise, turn to the point of sale or the Manufacturer (in case of repair, demand original spare parts);
- Periodically check and clean the flue pipe in accordance with applicable regulations;
- Include the Operation and Installation Manual in case the device is sold or rented.

1.3. One should never:

- lean on and climb on the fireplace;
- use the appliance in the event of faults or malfunctions;
- leave flammable materials within 1.5m of the fireplace;
- light fires with flammable materials and burn waste.

1.4. Hitze is exempt from civil and criminal liability in the event of:

- use of the fireplace contrary to the Operating and Installation Instructions;
- modification of the fireplace and unauthorized change of parts to non-original (these actions will immediately void the warranty);
- injury and property damage caused by damage due to improper installation and improper maintenance (not in accordance with the Operating and Installation Manual).

1.5. Purpose of the fireplace

TRINITY series fireplace inserts provide an additional source of heat in the rooms where they are located. These devices have intermittent burning hearths, with manual fuel loading, closed with a guillotine-type door. The main fuel used for combustion is hardwoods. In particular, we recommend seasoned birch wood. During combustion, heat energy is released and escapes from the combustion chamber by convection and radiation. The PN-EN 13229:2002 standard classifies the insert's hearth as 1b, with manual fuel feeding, closed fire door, and allows the insert to be enclosed and built into an alcove.

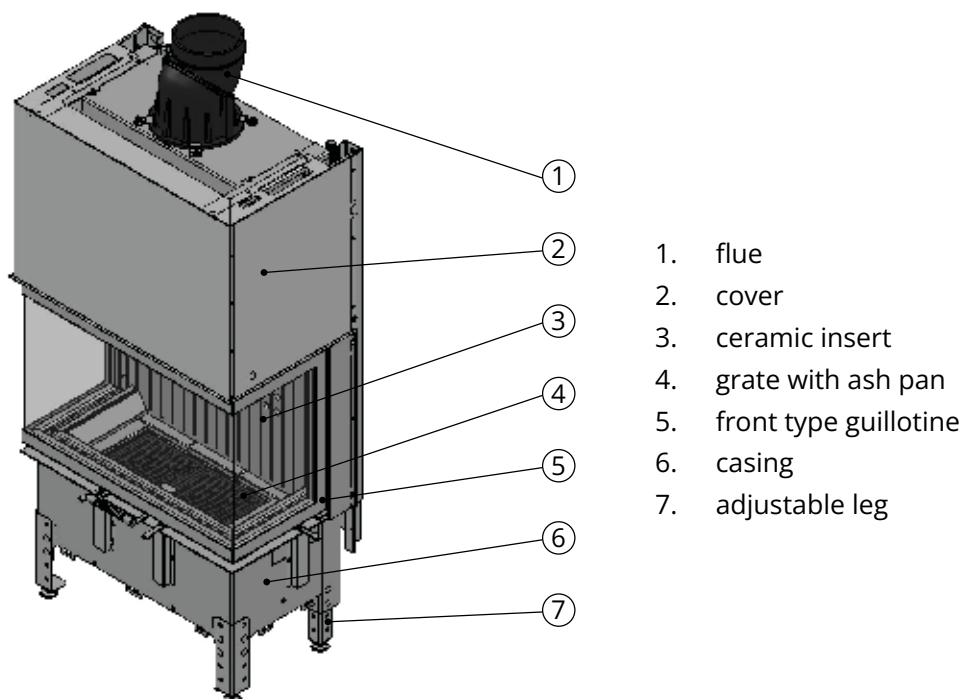


Fig. 1 insert TRINITY

Parameter	Symbol	Unit	Fireplace insert		
			TRI54x54x53.G	TRI54x80x53.G	TRI80x35x53.G
Nominal power	P	[kW]	10	12	12
Heating load range	Pog	[kW]	5-13	6-15,5	6-15,5
Maximum fuel loading weight	C	[kg]	2,1	2,8	2,5
Average fuel consumption	B	[kg/h]	2,8	3,7	3,3
Thermal efficiency	H	[%]	77	78	78
CO emissions (at 13% O2)	CO13	[%]	0,0948	0,0907	0,0633
Pollen emissions (at 13% O2)	Ep	[g/m3]	0,035	0,038	0,035
Average flue gas temperature	tśr	[°C]	205	239	222
Minimum active area of outlet grilles	Awy	[cm ²]	700-800	840-960	840-960
Minimum active area of inlet grilles	Awl	[cm ²]	400-650	480-780	480-780
Diameter of the flue pipe	Dcz	[mm]	200	200	200
Diameter of the air inlet pipe	Dd	[mm]	150	150	150
Dimensions of the glass in the fireplace	Sz	[mm]	540x540x530	540x800x530	800x350x530
Weight of the insert	m	[kg]	320	324	384
Fireplace class			1b	1b	1b
Maximum billet length (at circumference of 2530 cm)	lp	[cm]	30	35	45
Number of logs per load		[pcs]	2	2	3
Fuel type	Recommended seasoned hardwoods (beech, birch. hornbeam)				
Fuel moisture	between 12 and 20%				

Tab. 1 Technical data

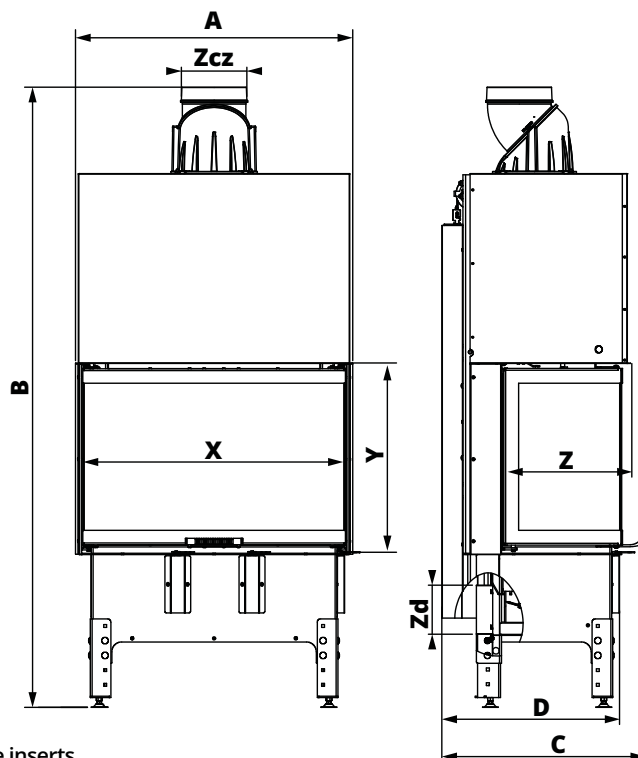


Fig. 2 Basic dimensions of fireplace inserts

Dimensions [mm]	Fireplace insert		
	TRI54x54x53.G	TRI54x80x53.G	TRI80x35x53.G
A	582	582	847
B	1895	1895	1895
C	800	1064	616
D	753	995	549
X	540	540	800
Y	585	585	584
Z	499	756	310
ØZcz	200	200	200
ØZd	150	150	150

Tab. 2

Dimensions of TRINITY series fireplace inserts with guillotine type doors

1.6. Construction and operation of the fireplace

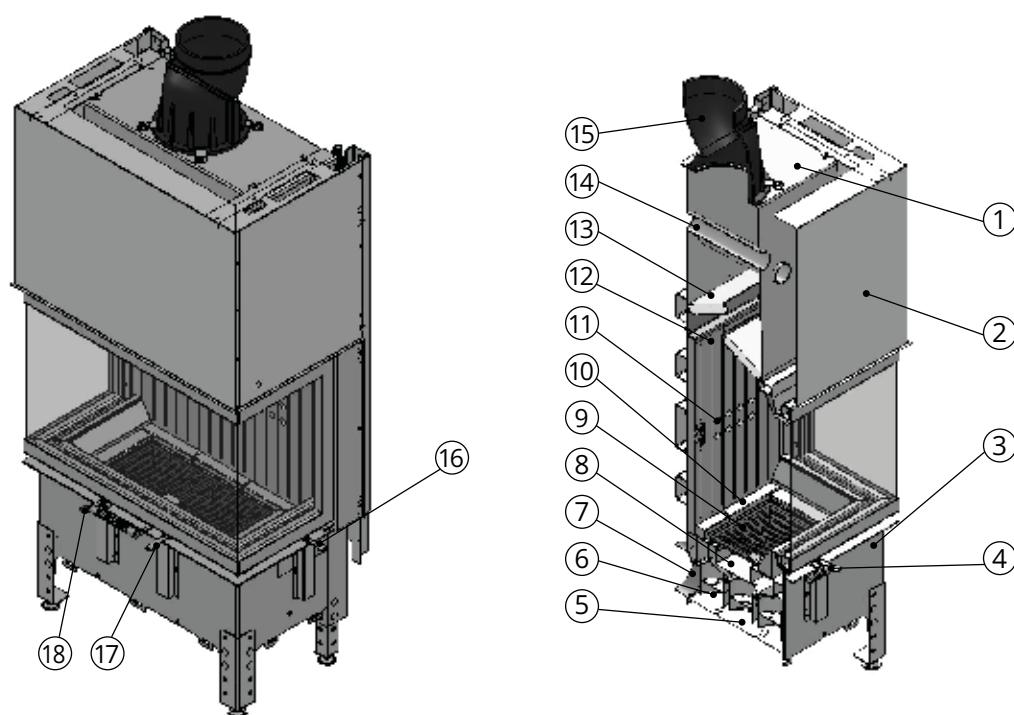


Fig. 3

General construction of the TRINITY series insert

The fireplace insert consists of a body **1** (the casing of the insert) made of boiler steel, grade P265GH, with a thickness of 3 mm. The upper part of the body is protected by a cover **2**, which safeguards the door lifting mechanism. The front of the insert is made up of steel guillotine doors, constructed from a special profile and shaped sheet metal, with heat-resistant glass and a handle **4**. The fireplace doors can be opened at their side wings (opening the side doors is only for servicing the insert). The combustion chamber **10** is lined with ceramic concrete **12** at the bottom and the rear wall. The hearth of the fireplace consists of a double-skin floor **3** that serves as the primary and secondary air inlet, as well as a space for the ash container **8** and the grate **9**. Air is

supplied to the insert through the intake stub **7** with a diameter of 150 mm and the expansion box **6**, which distributes the primary and secondary air. Thanks to this solution, the insert requires only one air supply pipe from the outside. Additionally, the insert is equipped with a removable cap **5**, which allows for the installation of the air intake from below.

The air control dampers are operated using levers located under the front (primary air **17**, secondary air + upper air curtain **18**) and under the side doors **16** (lower air curtain). The adjustment is done by turning the lever to the right or left. In the fully right position of the lever, the air supply is cut off, while in the left position, the maximum air supply is opened. Air is supplied to the combustion chamber through openings in the grate **9**. Secondary air enters the combustion chamber through openings in its rear wall **11**. The insert is also equipped with an upper air curtain and an additional lower air curtain, which is adjustable using a separate damper **16**. The lower air curtain enables quicker ignition of the insert and reduces the buildup of deposits.

Above the combustion chamber, there are special ceramic concrete plates called deflectors **13** (each insert in the TRINITY series has 2 deflectors). The flue pipes (tubes) **14** are welded to the insert's body. The flue pipes and deflectors form a convection channel that enhances heat exchange. During combustion, the exhaust gases flow along the walls of the combustion chamber, the deflector, and the horizontal flue pipes. They then exit to the chimney connector **15** and through the ducts to the chimney. The air surrounding the insert in the enclosure is heated (convection) and escapes into the room through appropriate ventilation gaps in the fireplace enclosure – heat recovery and additional room heating.

1.7. Opening and closing doors

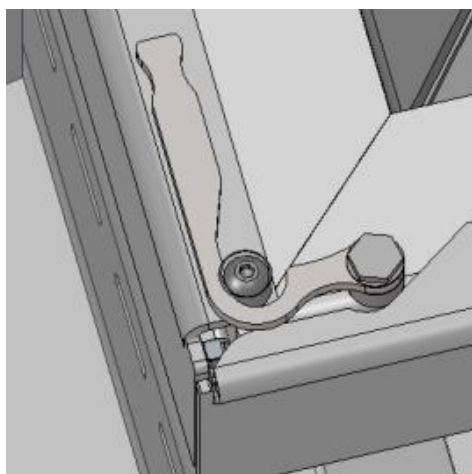
The guillotine type door, in addition to sliding up and down, has the ability to open the side door. The side opening is used only for servicing the insert (cleaning the glass, etc.). It is not intended for daily use. In order to open the door it is necessary to:

- open the catches protruding at the corners of the guillotine from both the top and bottom pull - releasing the door from its holder;
- slowly open by pulling the door towards you;

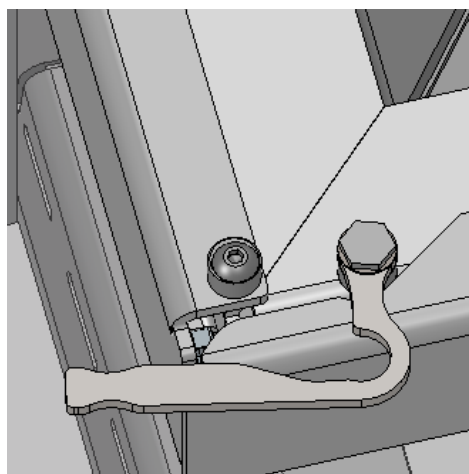
once the door has been opened, maintenance or cleaning of the insert can be carried out

NOTE!

The door opens at an angle, and a wider opening with the sleeve can cause damage.



a) closed catch



b) open catch

Fig. 4 | Side doors - opening and closing

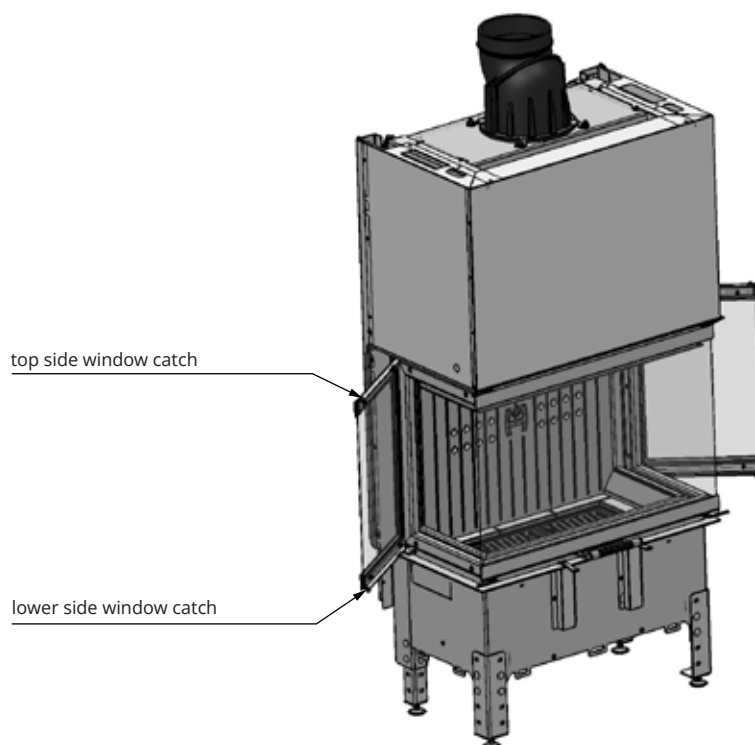


Fig. 5 Side door open

Closing the door involves:

- return the door to its initial position;
- move the catches, to the initial position - fix the door in the handle;

NOTE!

Do not slam the glass shut - this can cause the glass to break or shatter.

2. TRANSPORTATION, ASSEMBLY, INSTALLATION OF THE FIREPLACE

The device complies with PN-EN 13229:2002 and is CE certified.

Before assembling, installing and operating the fireplace, read the following Operating and Installation Instructions carefully and follow the instructions contained herein. This will ensure safe and efficient use of the fireplace. Failure to observe these instructions could result in the loss of warranty and put the user at risk of personal injury or death.

National and local regulations and standards must be observed during assembly, installation and operation, in particular:

- Regulation of the Minister of Infrastructure of 12.04.2002. Dz.U.Nr75, poz. 690 with amendments of 07.05.2004. r. Dz.U.Nr109, pos. 1156;
- Standard PN - B - 03406 :1994 Heating. Calculation heat demand;
- Standard PN - 89 / B - 10425 Smoke, flue and ventilation ducts made of brick;
- Standard PN - 78 / B - 03421.Ventilation and air conditioning. Design parameters of indoor air;
- Standard PN-EN 13229:2002 "Fireplace inserts including open fires for solid fuels. Requirements and tests".

The installation of the fireplace must be carried out by a qualified person or company and the technical approval must be carried out by a master chimney sweep and a fire specialist.

The order of execution of the work on the installation of the fireplace:

- Preparation of the place where the fireplace is to stand, checking the bearing capacity of the ground
- Connecting the fireplace to the chimney and making a supply;
- Using the fireplace and observing for defects and irregularities (about 2 weeks).

2.1. Transportation

- the insert is delivered pre-assembled, fixed to a pallet and wrapped in stretch foil;
- the fireplace must be transported in an upright position;
- after unpacking, check that the fireplace is not damaged by transport;
- unpack the insert close to the place of installation; when moving (preferably with a trolley), be careful (pay attention to the door and glass);
- the fireplace packaging materials are not toxic or harmful; they must be recycled or disposed of by the user;
- in order to relieve stress on the fireplace, in the event of installation in a difficult location, the ceramic concrete insert (covering the hearth) may be removed; after installation, each element must be correctly re-arranged.

2.2. Surface recommendations:

- before installing the fireplace, check the load-bearing capacity of the floor (that it meets the loadbearing conditions for the type of appliance according to its mass);
- the floor must be made of a non-combustible material at least 30 cm thick, with a strip of space in front of the fire door, at least 50 cm wide and extending beyond the edges of the door by at least 30 cm.

2.3. Flue pipe

The fireplace insert requires the proper selection of the cross-section of the flue pipe (smoke duct) and the proper height of the flue pipe.

The cross-sectional area of the flue and smoke duct is determined according to the formula:

$$F = \frac{0.003 \times Q}{\sqrt{h}} \quad [m^2]$$

Where:

F – cross-sectional area of the flue and smoke duct [m²];

Q – rated thermal power of the insert [kW];

h – chimney height [m].

According to current regulations, the flue must not be smaller than 14x14cm or have a diameter of 15cm. Chimney inserts with a larger capacity require a larger flue pipe cross-section. The cross-section also depends on the height of the chimney.

The fireplace must be connected to a flue pipe or riser pipe in accordance with the applicable national standards.

The size of the chimney draft should be:

- minimum draught – 6 ± 2 Pa;
- **AVERAGE, RECOMMENDED DRAUGHT – 12 ± 2 Pa;**
- maximum draught – 15 ± 2 Pa.

NOTES:

To ensure proper operation of the fireplace it is necessary to provide a sufficient draught from the chimney at the end of the flue pipe:

- insufficient draught in the chimney causes poor operation of the insert, excessive congestion of the glass and excessive pollution of the flue gas ducts; the total heat output of the insert is reduced (the flue gases may leak into the room);
- A draught that is too strong can contribute to over-intensive combustion, high fuel consumption and lead to permanent damage to the fireplace.

Regular inspection of the chimney by a chimney sweep is recommended.

2.4. Connection to flue pipe:

- Before installing the fireplace, it is necessary to perform an expert examination and selection of the flue in terms of its technical parameters and technical condition;
- Installation of the insert can be made after a positive result of the chimney expert's examination of the smoke duct.

The flue pipe must comply with the applicable national or European standards.

In accordance with the operating and installation instructions provided, fit and connect the fireplace to the chimney (including installation of screen plates - if used - and insulation of the flue pipe).

The manufacturer **does not recommend** assembling and installing the appliance yourself. In order to ensure a proper and safe start-up of the appliance and the fulfilment of the guarantee conditions, the assembly and start-up of the appliance must be commissioned by a person or a firm having the appropriate installation qualifications. The fitter is obliged to confirm in the Warranty Card (entry and stamp) that the installation has been carried out in compliance with the art. and valid legal regulations. Failure to do so will void the manufacturer's warranty.

2.5. The flue pipe system should meet the following features:

- the cross-section of the flue pipe must not be smaller than that of the flue pipe and must not narrow towards the chimney (adapters may be used to increase the diameter from the flue pipe to the chimney);
- the flue pipe should be as short as possible and have as few bends as possible (increase flow resistance, avoid condensation);
- The fireplace must not be connected to a flue pipe which is shared with another heating appliance;
- it is advisable to connect the fireplace to a separate flue;
- the flue pipe may not have more than two inclinations of 45° up to a pipe height of 5m and 20° for pipe heights of over 5m;
- the flue pipe must be made of non-combustible materials and be thermally insulated;
- the flue pipe insulation should have a fire resistance of at least 60 minutes;
- a straight section of pipe at least twice the diameter of the fireplace flue should be used at the exit from the flue; the joint should be made tight;
- The end of the chimney should allow for a smooth exit of the flue gases and be located at least 60cm above the highest point of the roof;
- the connectors must be made of stainless steel 1.4401 (316), heat-resistant or flue-grade steel suitably painted with a special paint and of an appropriate sheet thickness (heat-resistant and stainless steel 1mm thick and flue-grade 2mm thick) - the material should be characterised by resistance to high temperatures, flue gas acidity and condensate.

When enclosing the fireplace fume cupboard, leave enough space and easy access to ensure that the fume cupboard, flue pipe and chimney can be cleaned.

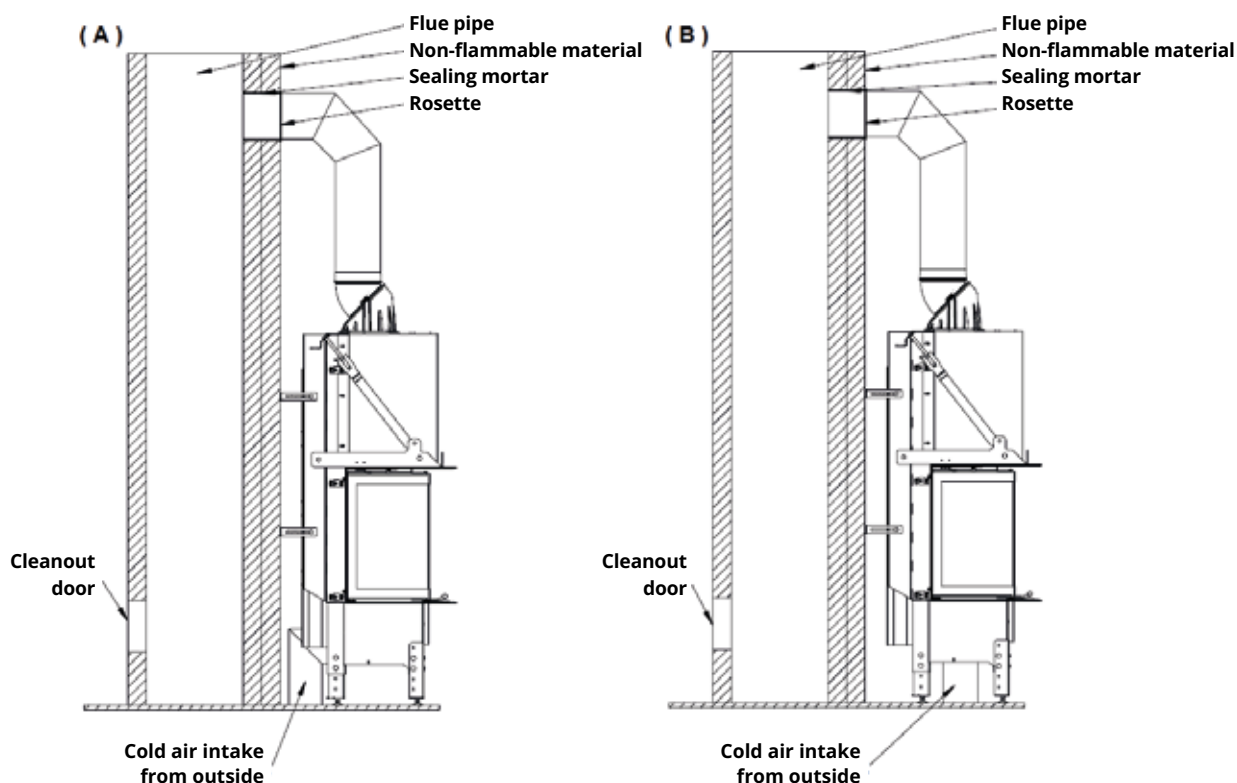


Fig. 6 Diagram of the connection of the fireplace to the flue (A - air intake from the back; B - air intake from the bottom)

2.6. Fireplace ventilation:

- it is essential to provide fresh air from outside to the combustion chamber (too little fresh air will cause poor combustion and there may be a risk of smoke poisoning - carbon monoxide is produced);
- The construction of the fireplace should be designed to allow fresh air to enter from the outside (a pipe with a diameter of 150-200 mm is used);
- it is assumed that the amount of air required to burn 1kg of wood is approximately 8mu;
- when using an air distribution system to other rooms, in order to circulate the air freely, ensure that the cooled air is returned to the room where the fireplace is installed (otherwise the operating cycle of the fireplace may be disrupted and the heat distribution process may be impaired);
- When determining the location and installation of the unit, attention should be paid to the principles of correct air circulation and air balance in the room;
- ventilation must be provided in the room where the fireplace is installed;
- the ventilation of the insert should have a cold air intake and a heated air outlet (there should be ventilation of the convection space to allow the heating surfaces of the insert to be washed together with the flue pipe).

2.7. Installation of the insert

The device must be installed in accordance with applicable building code standards.

The installation and assembly of the fireplace must be performed by qualified specialists.

- the fireplace must be positioned at a safe distance from any flammable products (it may be necessary to protect the walls and surrounding materials);
- the enclosure should provide easy access to the adjustment and operating handles (allowing the insert to be assembled and disassembled without dismantling and damaging it);
- do not install the insert in bedrooms, bathrooms or rooms where there is another heating appliance without an independent air supply;
- TRINITY inserts are of uniform construction and do not require additional supports;
- The height adjustment (leveling) of the fireplace is facilitated by the legs (which can be raised by a maximum of 13 cm) and the foot (which can be unscrewed by a maximum of 3 cm).
- If it is necessary to raise the fireplace above the leg adjustment, a brick base should be constructed and the device placed on it (the legs needed for leveling should not be removed);
- If the door is not properly levelled, it will not work properly (it will not close properly);
- an inspection window of at least 20cm x 30cm is absolutely required to allow easy access to the throttle mechanism, to allow servicing of the counterbalance mechanism (replacement of each counterbalance wheel, replacement of the cables of the guillotine mechanism, smoke duct and chimney without the necessity of dismantling the enclosure);
- In the absence of inspection windows, the manufacturer shall not be held financially responsible for any damage to the insert that occurs during servicing or warranty work.

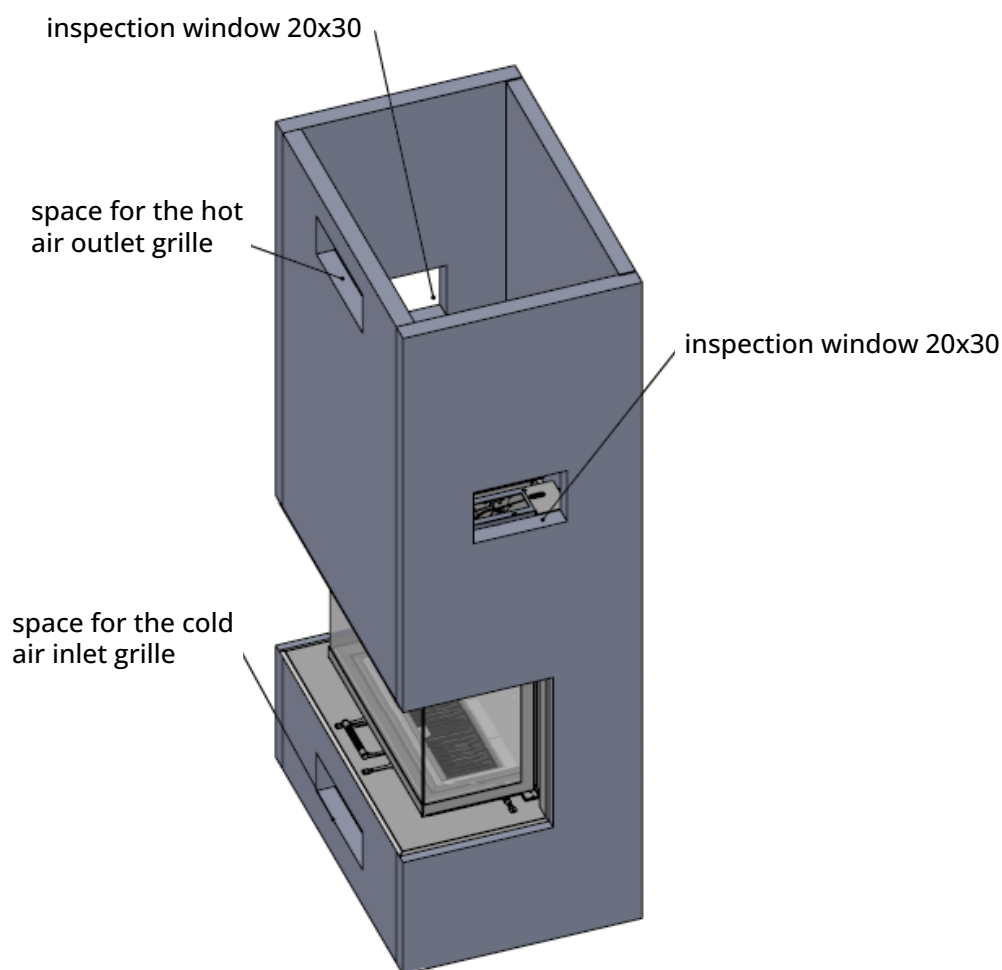


Fig. 7

Simplified insertion diagram
with an example of the location of inspection windows

2.8 General recommendations for installation:

- The fireplace can be positioned anywhere, maintaining the necessary distances from the insulation and the building structure;
- non-flammable insulating materials with thermal resistance must be used for the substructure and installation of the fireplace $2 \left[\frac{\text{m}^2\text{K}}{\text{W}} \right]$;
- the building should be made of non-combustible materials;
- the distance between the insulating material and the insert should be at least 10 cm;
- in the cladding there should be a hot air outlet grille located above the fireplace at a distance of 80 cm from the ceiling (for flammable materials);
- The cladding of the fireplace is subject to expansion during normal operation (heating), therefore, to avoid cracking, components made of stone, marble or ceramic should be installed with minimal gaps;
- As an insulating material, it is best to adopt a material that is resistant to temperatures above 500°C;
- It is best not to insulate the flue pipe (it releases heat better into the room);
- The thickness of the insulation depends on the thermal conductivity coefficient λ (the substance's ability to conduct heat) and the thermal resistance of the material in question;
- the insertion structure should have a cold air inlet grille (at the bottom of the structure) and a hot air outlet grille.

The λ value is specified by the insulation manufacturer, e.g. for mineral wool it is 0.035-0.045. The lower the λ value, the better the insulator („warmer in the room”).

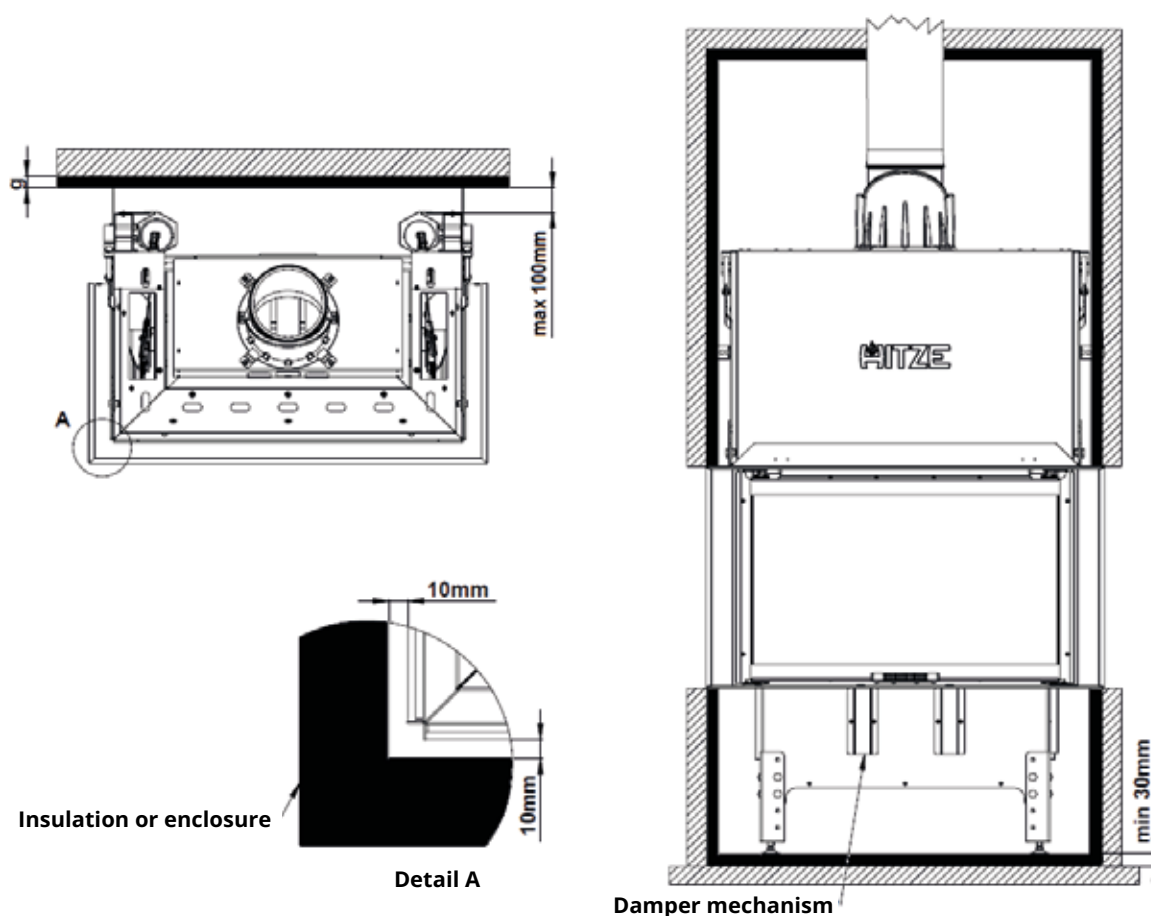


Fig. 8 Standard fireplace installation

The thickness of the insulation is calculated from the formula:

$$g = R \cdot \lambda$$

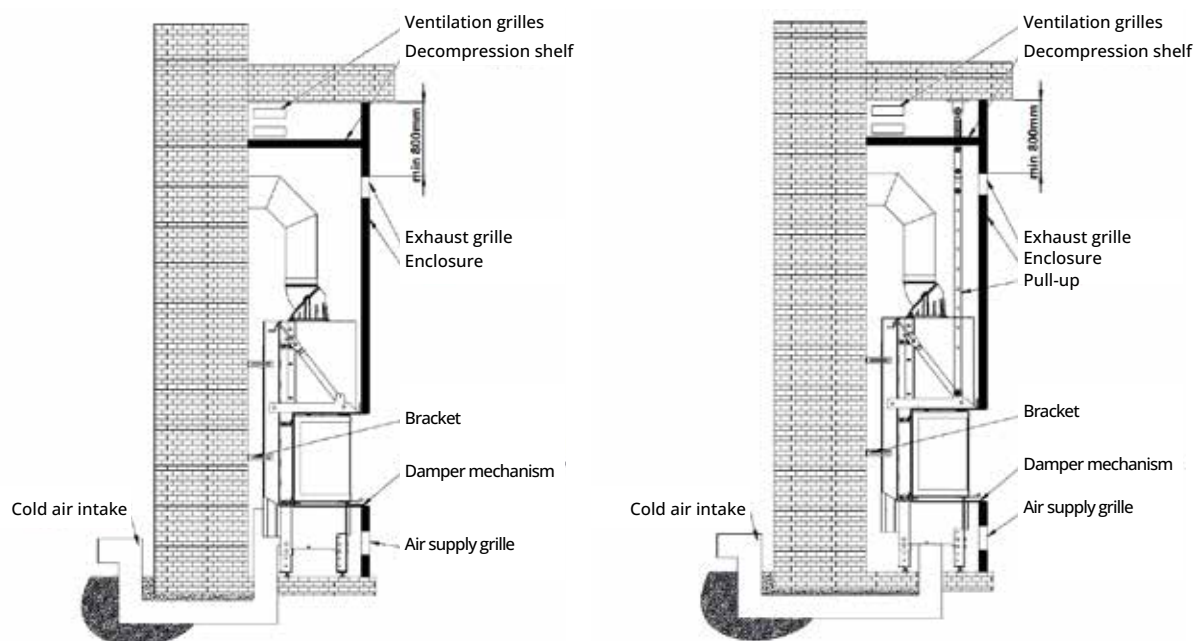
where:

g – thickness of insulation (partition) [m];

λ – thermal conductivity coefficient [W/m-K];

R – coefficient of ci epl resistance of the material layer [m²-K/W].

For materials with warmer resistance $2 \left[\frac{m^2 \cdot K}{W} \right]$ the thickness of the insulation layer, for $\lambda=0.035$ and $R=2$, is 0.07m or 7cm.



a) Installation of an insert in an enclosure with a weight of up to 200kg, with air intake from the rear.

b) Installation of a fireplace insert in an enclosure with a weight of up to 550kg, with air intake from below (the pull-up is not part of the insert and must be purchased separately from the manufacturer).

Fig. 9 Recommended installation method for the insert

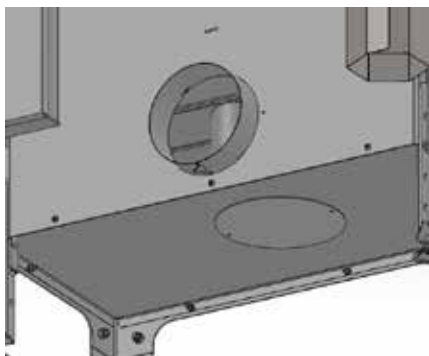
The areas of the grilles, inlet and outlet, depend on the power of the fireplace and the size of the room and its cubic capacity. The height of the room is 2.5m.

Fireplace power [kW]	Minimum room area [m ²]	Minimum room volume [m ³]	Inlet grille area [cm ²]	Outlet grille area [cm ²]
10	50	125	400-650	700-800
12	60	150	480-780	840-960
12	60	150	480-780	840-960

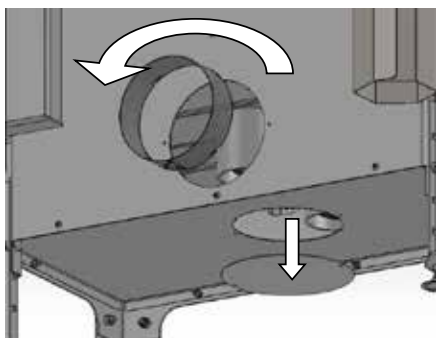
Tab. 3 Surfaces of inlet and outlet grilles in the fireplace cladding

2.9 Air intake configuration

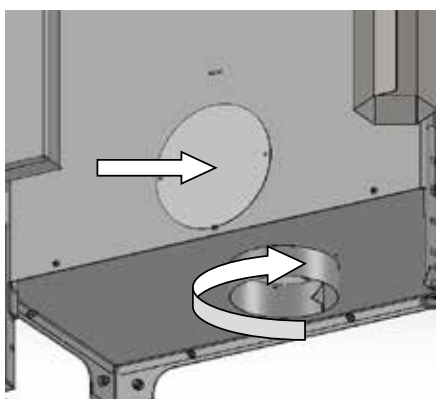
The design of the inserts allows 2 different configurations of air intake to be fitted to the insert. The air intake installed by the manufacturer in the rear part of the insert and the possibility of switching the air intake from the rear to the bottom as shown below.



Air intake fitted as standard by the manufacturer



Unscrew the air intake by turning it to the left and remove the lower cover by unscrewing 2 screws.



The cover is screwed into the back of the cartridge, while the air intake is tightened into the bottom of the cartridge.

2.10. Mounting to the wall

The fireplace is equipped with 4 wall brackets to ensure the stability of the fireplace. The choice of how to fix the brackets to the wall must be made by yourself, taking into account the loads that will act on the insert and the place of fixing.

We recommend installation using a chemical anchor and M12 threaded rod.

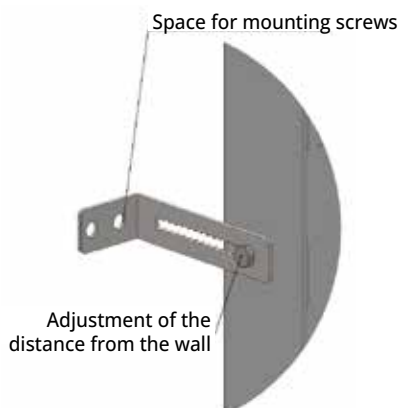


Fig. 10 Support for mounting the insert on the wall

3. STARTING UP

The initial start-up of the fireplace, after it has been seated and properly connected to the chimney, must be carried out by the installer or an authorised service technician. The user must be present during commissioning so that he/she can be trained by the installer. The installer must refuse to commission the fireplace if he discovers an installation fault which endangers the safety of the user. Correct commissioning must be confirmed in writing on the guarantee card.

3.1. Preparation for launch

Before firing up for the first time, you should:

- remove any stickers and other paper stickers and accessories from the body of the mantle, ash pan or paper that could be the cause of a fire, this also applies to transport protection;
- check the proper seating of: deflector(s), ceramic fittings, grate, and whether they have not fallen out of their correct position during installation (If any defect in seating is found, correct it. Otherwise, the fireplace may malfunction. In the types of cartridges where a multi-part glass is used in the door, check that the individual parts of the glass have not become unsealed during transport or use of the fireplace);
- check operation:
 - mechanism for regulating the air supply to the combustion chamber (cold air intake dampers);
 - The mechanism of operation of the front door closure (hinges, handle);
- check the correctness of the installation of the plumbing system according to this Operating and Installation Manual and according to compliance with applicable regulations especially in terms of safety, including:
 - Whether the fireplace is leveled;
 - Whether the ventilation of the room and fireplace is properly done;
 - Whether the air supply from outside and into the room is unobstructed;
 - Whether the connection to the chimney is tight;
 - Whether the fireplace cladding was properly constructed.

3.2. Firing up fireplace

Before firing up the fireplace, you should:

- in the hearth first put the thicker logs, then the smaller wood, and finally the small pieces (sub-stick) - light with matches; open the primary air regulator to maximum, and the secondary air regulator to minimum;
- Primary, secondary and booster air regulators open to maximum;
- **After firing up, the fireplace door must be closed;**
- When the fuel is properly ignited, use the air regulators to set a calm, rather muffled sparging (opening the primary air damper to 30%, the secondary air damper to 50%, primary auxiliary air close, this causes only a small part of the air to be fed under the fireplace grate; the remaining amount of air is fed to the air curtain system, which protects the glass(s) from sooting and to the gas afterburning system; opening the primary air damper to 100% - maximum to the left causes very intense combustion of the fuel);
- It is recommended in the final stage of burning, to open the door and burn the remaining embers on the grate with a poker to better burn the fuel;
- Test the operation of other devices in the installation (first burns).

NOTES:

Since a large amount of air is supplied under the grate and to the air curtain system and the flue gas afterburning system, an excessive amount of fuel in the combustion chamber leads to the production of a large amount of wood gas, which results in temporary soot buildup on the glass.

The maximum adjustment of the damper to the right completely cuts off the air supply to the combustion chamber, which causes the fire to gradually go out.

If necessary, the grate can be cleared using a poker.

During the first hours of operation, it is recommended to operate the fireplace at low load, i.e., up to 50% of the normal load.

The first ignition may be accompanied by water condensation on the inner walls of the combustion chamber. This is a normal phenomenon caused by the condensation of water vapor in the flue gases. It should subside once the chamber is heated.

If flue gases escape from the fireplace chamber, the flue damper setting should be adjusted, and the chimney draft should be increased.

The fireplace should be cleaned of ash before the next fire.

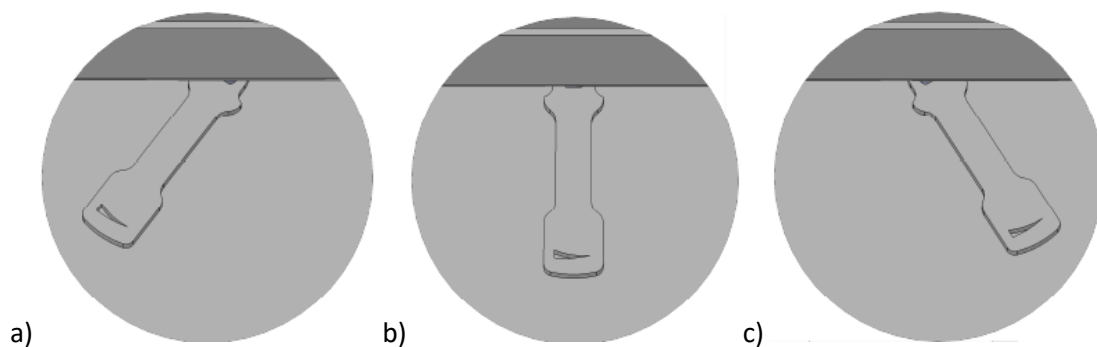


Fig. 11

Air conditions: a) 100% open air; b) 50% open air;
c) closed air

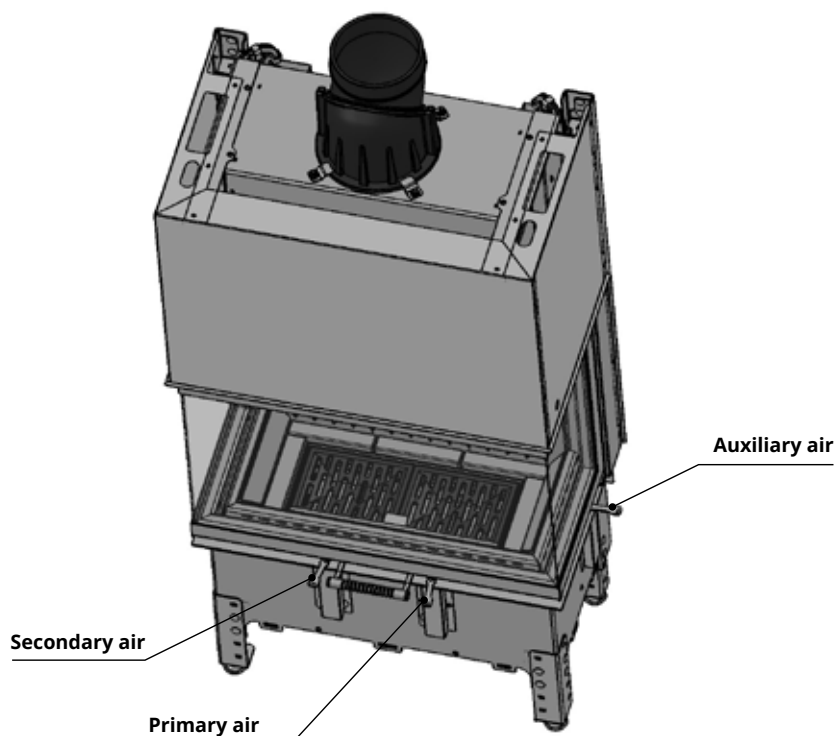


Fig. 12

Location of individual air control levers

4. USE

The surface of the insert is coated with a special heat-resistant paint that, after the fireplace is lit, first becomes soft (at which point care should be taken not to scratch it), and then hardens. This process, during the first few burns, causes the release of an unpleasant odor. The manufacturer recommends ventilating the room intensively during this time. If there are pets or birds in the room, they should be temporarily relocated. During the first burns (for about 2 weeks), the insert manufacturer recommends maintaining a small flame and burning a smaller amount of fuel at a lower temperature. This method of burning is intended to prevent cracks in the ceramic concrete lining, deformation of the structure, and damage to the protective coating (paint) of the insert.

4.1. Types of fuel

Due to the design of our devices, the recommended fuel to be used is the wood of deciduous trees such as oak, hornbeam, ash, beech, and birch. We particularly recommend birch for burning. The best fuel is seasoned wood (at least 2 years in a well-ventilated, dry place), cut and split into logs. We advise against using softwood. Fresh or poorly dried wood is not a good fuel, as it has limited energy properties. Burning improperly dried wood can lead to increased creosote emissions, which can accumulate in the flue pipes and potentially cause the glass to crack.

NOTES:

The combustion of waste fuels, flammable liquids and other combustion materials not recommended by the manufacturer of the fireplace is forbidden.

The manufacturer strictly prohibits the use of coal, tropical wood, any type of product containing chemical compounds such as petrol, alcohol, naphthalene, oil, od- pads and laminated panels containing adhesives as fuel for the fireplace.

Adding fuel:

- Fuel should be added when the flames disappear above the layer of embers in the combustion chamber. It is best to rake the embers into a “pyramid shape” on the grate (on both sides to allow the proper amount of air from beneath the grate to reach the point where flames appear) and add kindling.
- The embers should not be raked evenly across the grate, as this significantly restricts the airflow beneath the grate and can lead to the production of too much gas in the combustion chamber, which could result in a hazardous gas buildup and the potential for an explosion.
- The logs in the combustion chamber should be placed parallel to the plane of the door.
- Before loading a fresh batch of fuel into the fireplace, the grate should be emptied of ash. If necessary, the ash container should be emptied.

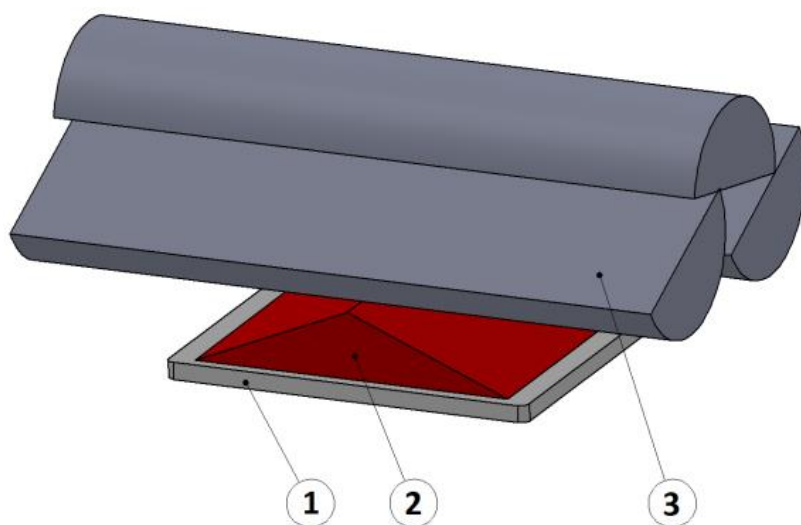


Fig. 13 Method of placing embers and adding wood; 1 - grate, 2 - embers, 3 - wood chunks

4.2. Preventing the escape of fumes

To prevent the escape of fumes from the fireplace into the room when opening the door, it is recommended to:

- About 10 seconds before opening the door, fully open the primary air regulator (the damper lever should be moved fully to the left);
- Open the flue damper in the smoke pipe (if the insert has one);
- Slightly crack open the door and, after waiting a few seconds (the time needed for the flue gases to be drawn away), slowly open the insert door; After adding the correct amount of fuel, close the firebox door;
- When opening the door and after it is open, proceed very carefully, as burning pieces of fuel may fall out of the fireplace;
- After adding the proper amount of fuel, close the firebox door;
- Once the fuel is ignited, set the air regulator to the primary position;
- The optimal amount of fuel is listed in Table No. 1.1.

NOTES:

The manufacturer of the insert warns against overloading the fireplace with fuel. Overfilling may lead to permanent damage to the device's structure.

4.3. Glass cleanliness

To maintain the cleanliness of the glass, in addition to using the proper fuel, the following factors have an impact:

- To supply an adequate amount of combustion air;
- optimal chimney draft;
- how to operate the oven;
- Using fuel with a moisture content in the range of 12%-20%.

In order to keep the glass clean, it is recommended to add the recommended amount of fuel so that the fuel is centrally on the grate and as far away from the glass as possible (this also applies to briquettes - the distance between them is 5 to 10 mm).

If the glass is dirty during heating, we recommend increasing the intensity of combustion by opening the primary air regulator, as a result of which the glass will mostly clean itself.

4.4. Operation in harsher climatic conditions and during transitional periods

In the so-called transitional period or in harsher climatic conditions (e.g., during fog, on humid and rainy days, during strong gusty winds, or when the outside temperature exceeds +15°C), the chimney draft may deteriorate, resulting in incomplete flue gas venting. To mitigate this unfavorable effect, it is recommended to load the insert with the smallest amount of fuel possible or to additionally use draft regulators.

4.5. Ash removal

Depending on the amount and type of fuel being burned, it is necessary to:

- Using a poker, rake the ash through the grate into the ashpan;
- After raking the ash, lift the grate holder, then remove the ashpan and empty it;
- The ashpan should only be emptied when cold. We recommend performing this task no later than before each re-ignition;
- Before emptying the ashpan, check if it contains any glowing remnants of fuel, which could cause a fire in the waste container.

NOTES:

The manufacturer recommends that the ashpan should not be overfilled. Overfilling the ashpan restricts the airflow under the grate, which leads to a deterioration in combustion efficiency, and in extreme cases, may prevent the fireplace from igniting.

Allowing ash to accumulate in the ashpan for too long may result in premature **corrosion**. The ash from burned wood can be used for composting or as a fertilizer.

4.6. General comments

One should:

- Ensure that the firebox door (combustion chamber) and the ashpan door (if the insert has one) are closed (except when performing maintenance tasks on the insert).
- After any extended break in the insert's operation, and before re-igniting, check the cleanliness and unobstructed flow of the chimney flue and the combustion chamber.
- When performing any maintenance or operational tasks on the insert, remember that parts of the insert may be very hot, so protective gloves should be used.
- For any repairs, only use replacement parts from the insert manufacturer.
- All repairs should be carried out by an installer with the appropriate qualifications.
- During the operation and use of the fireplace, keep the rules that provide basic safety conditions.
- Protect the insert from exposure to construction chemicals used in the assembly and installation, as these can cause damage and void the warranty.

Prohibited:

- leave any flammable or heat-sensitive items near the glass of the fireplace;
- operate the device with a broken glass;
- extinguish fireplaces with water;
- allow children to access the appliance;
- make any structural alterations, changes to the installation and operating principles without the manufacturer's written consent;
- in the event of any interference with the operation of the device, immediately extinguish the fireplace

NOTES:

Emergency extinguishing of the fireplace is to cover the fuel with dry sand or cold ash.

WATER MUST NOT BE USED!!

When performing tasks on a malfunctioning fireplace, ensure that the room is well-ventilated and have a second person on hand, equipped with a fire extinguisher.

As a result of slow combustion, large amounts of organic combustion products are released, resulting in the formation of creosote in the flue which can ignite. A so-called chimney fire then occurs, from which the entire building can catch fire.

In case of a chimney fire, the following actions should be taken:

- **Cut off the air supply to the fireplace by closing the cold air inlet dampers.**
- **Close the rotary damper in the chimney system (if the system is equipped with one).**
- **Close the fireplace door tightly.**
- **Notify the nearest Fire Department by calling 112 or 998.**

4.7. Lining of the insert

The inserts are lined with ceramic concrete inside, which protects the insert from direct exposure to high temperatures and helps accumulate the generated thermal energy. During use, the accumulative concretes wear out, which may lead to cracking and chipping. These phenomena do not affect the operation of the insert nor degrade its performance. The rate of wear depends on the intensity of use and the amount of energy the concrete accumulates and then releases into the surrounding environment. **Cracking and spalling in the concrete are not covered by the warranty, as they are a natural wear process (cracks can also occur due to rapid temperature fluctuations inside the insert).** The concrete should be replaced when visible gaps appear in the walls of the fireplace insert. Failing to follow these recommendations may result in damage to the insert and the loss of the warranty.

5. CONSERVATION

In order to maintain safe and trouble-free operation of the device, it is necessary to observe the following guidelines:

- Perform periodic and scheduled maintenance tasks – at least once a year, have the fireplace inspected by a specialized service;
- Maintain cleanliness of the following parts: the glass, combustion chamber, ashpan, and chimney flue;
- Regularly empty the ashpan – leaving ash for too long can lead to corrosion of the ashpan;
- Adjust the frequency of cleaning and maintenance of the combustion chamber according to the type of fuel used;
- When cleaning steel or cast iron elements inside the insert, use appropriate tools such as a brush, scraper, poker, and always wear protective gloves;
- All maintenance tasks should be performed only on a cooled-down and extinguished device;
- Clean the ceramic glass of the insert with kitchen paper (paper towel). Moisten it with water and then wipe away some of the clean ash from the combustion chamber, avoiding direct contact with the steel and cast iron components of the device. By rubbing the glass with this damp paper, you can effectively dissolve soot and then wipe it off with a dry paper towel. Any cleaning agents used on the glass must not contain abrasive materials that could scratch or damage it;
- At least twice a year, have the chimney flues cleaned by an authorized chimney sweep company, with the cleaning documented in the warranty card;
- Clean the interior of the fireplace, check the air intake and flue gas outlet;
- Before each heating season, replace all seals.

5.1. Recommended periodic cleaning of the fireplace

To ensure efficient combustion in the fireplace insert, the combustion chamber, grate, smoke pipe, and flue pipes should be cleaned periodically.

Element	Frequency	Tools and resources
Convection surfaces of the fireplace and pipes connecting to the flue pipe - cleaning	As needed, but at least once a year or after a prolonged break in operation	Spring material brush, ash vacuum cleaner, fireplace cleaners.
Flue pipe, chimney - check patency of chimney and condition of flue system	At least twice a year, after the heating season and an extended break in operation.	Specialist chimney sweep company
Front glass	As needed	Cooled – a damp paper towel with a small amount of clean ash, without abrasive materials that could cause damage.
Grate and elements inside the insert	As needed	Vacuum cleaner, fireplace cleaners.
Maintenance of the flue gas throttle lever -replacement of glass and fireplace door gaskets	At least once a year, after the heating season or as needed depending on the level of consumption	Service authorized by the manufacturer

6. FAULTS AND IRREGULARITIES DURING OPERATION

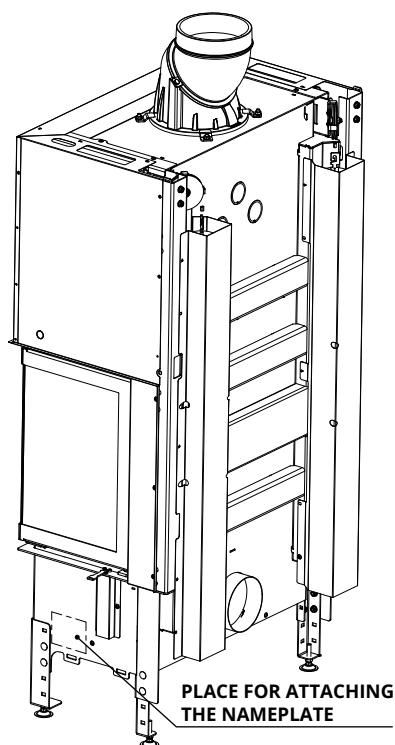
During daily operation of the fireplace, the malfunctions of the unit described below may become apparent, indicating that the fireplace was improperly installed without observing the relevant guidelines contained in this Operation and Installation Manual and the applicable laws.

	Problem	Solution
Backflow of smoke into the room when the fireplace door is opened	The door may have been opened too abruptly causing negative pressure in the combustion chamber	slow door opening
	closed adjustable chimney duct shaft (if the installation has such an option)	shaft opening
	Insufficient air supply in the room where the fireplace is installed	check the efficiency of the ventilation and ensure the right amount of air in the room
	atmospheric conditions	
	inadequate chimney draught	check the efficiency of the chimney installation

Low heating capacity or the phenomenon of fireplace extinction	insufficient amount of fuel in the combustion chamber	increase the amount of fuel to the required level
	fuel humidity too high	use wood with a moisture content of up to 20%
	inadequate chimney draught	check the efficiency of the chimney installation
Low heating capacity with pre-forked combustion process in the fireplace	unsuitable, low-calorie wood was used	change the species of wood burned to a more caloric one
	fuel humidity too high	use wood with a moisture content of up to 20%
	used thin, fine pieces of wood that burn quickly	use to burn other thicker logs
Dirty windshield, no self-burning windshield	too slow fuel combustion which results in low temperature in the combustion chamber	increase the amount of air in the combustion chamber, use wood with a moisture content of up to 20%
	coniferous wood with high resin content was used	change the species of wood to dry hardwoods
Lack of proper, correct operation of the device may be caused by internal factors	tall objects too close to the chimney	Increase the chimney height or use a „firefighter” chimney cap or another type.
	unsuitable atmospheric conditions, e.g., wind or lack thereof, low atmospheric pressure, high humidity, fog, etc.	use a chimney cowl, but if this does not help you should perform an expert chimney sweep to determine the source of the problem

7. NAMEPLATE

The nameplate is located on the back of the device.





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HITZE Sp. z o.o.

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POLAND

CE 16

1452

Wkład kominkowy stałopalny

Fireplace insert for constant burning / Kamineinsatz dauerbrand

Norma odniesienia:

Reference standard / Referenzstandard

EN 13229:2001; EN 13229:2001/A1:2003; EN 13229:2001/A2:2004;

EN 13229:2001/AC:2006; EN 13229:2001/A2:2004/AC:2007

Nazwa / Name / Name :

ALBERO 9 kW Standardowy Pionowy / albero 9 kW Standard vertical / albero 9 kW Standard vertikale

Typ / Type / Typ :

AL95.V

Certyfikat nr / certificate nr /

Zertifikat Nummer :

Klasa kominka / insert class /

Kamine Klasse :

1c

Nr fabryczny / serial Number /

Seriennummer :

000010 / 2016

Nominalna moc ciepła / nominal heat

output / Nennwärmeleistung :

9,0 kW

Maksymalne ciśnienie robocze /

Maximum operating pressure / Maximaler

Betriebsdruck

Moc ciepła wody / water heating

capacity / Wasserwärmeleistung :

nom. _____

min. _____

Typ paliwa / fuel type / Kraftstofftyp

Drewno twardość /

hardwood /

Hartholz

Moc grzewcza w pomieszczeniu / room

heating capacity / Raumwärmeleistung :

max. _____

min. _____

Sprawność ciepła / thermal efficiency /

Wirkungsgrad :

nom. 87,4 %

Emisja CO (13% O₂) / co emission / co

Emission :

nom. 0,096 %

Średnia temperatura spalin / the

average temperature of the exhaust gas /

Abgas temperatur am Stutzen :

184,0°C

Minimalny odstęp od materiałów palnych / minimal distance

from flammable materials / Mindestabstand zu brennbaren Materialien

- ściana przednia / front wall / vorderwand

200 cm

- ściana tylna / rear wall / rückwand

200 cm

- ściany boczne / side walls / reitenwände

200 cm

Uwagi / notes / comments :

Należy przeczytać i stosować się do instrukcji / Be sure to read and follow the user guide / Man soll die Anweisungen lesen und befolgen

Używać wyłącznie zalecanego paliwa / use only the fuel recommended / Nur die empfohlene Brennstoff

Fig. 14 Model of the nameplate and its location

8. INSPECTION CARD

FIREPLACE INSPECTION LOG	
Overview	Date, signature and stamp
Overview	Date, signature and stamp
Overview	Date, signature and stamp
Overview	Date, signature and stamp
Overview	Date, signature and stamp
Overview	Date, signature and stamp
Overview	Date, signature and stamp

FLUE INSPECTION REGISTER

[illegible]



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HITZE Producent Kominków

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