HESTIA

OPERATION AND INSTALLATION MANUAL



Version 1 01/03/24
Contents of manual may be updated without notice. For the latest version of this manual please refer to our website: www.paulagnewdesigns.com.au

PAUL AGNEW | DESIGNS

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INTRODUCTORY INFORMATION

Dear Customer,

Thank you for buying Paul Agnew Designs solid fuel appliances!

Natural heating – these words perfectly reflect the philosophy of Paul Agnew Designs brand. In line with this philosophy, we produce fireplaces and stoves fired with wood, i.e. the raw materials which are the least harmful for the environment. Using a state-of-the-art technology, we have created innova ve solu ons offering modern designs and high heating efficiency.

Our products have been designed to provide you with trouble-free opera on and cosy warmth!

Before installing and connecting the fireplace insert to the heating system, it is absolutely essential to become familiar with the *Operation and Installation Manual* and check if all components are included.

The information contained in the *Operation and Installation Manual* is crucial for ensuring the correct functioning of the fireplace insert, and thus eliminating the risk of damage and accidents caused by improper use.
In the case of doubts or operation-related problems, contact your purchase point or the Manufacturer.

NOTE:
This device must not be used by children.
Never leave your children or animals unattended when the fire is burning or when the fireplace is still hot. Danger of burns (the glass and parts of the fireplace installation can be very hot).

In order to improve the product, the Manufacturer reserves the right to make changes in drawings, photographs and descriptions or to modify the parameters of equipment without notice at any time.
The *Operation and Installation Manual* may not be copied as a whole or in part without prior consent of the Manufacturer. Please make sure that the *Operation and Installation Manual* is stored out of reach of children. If the *Operation and Installation Manual* is destroyed, lost or damaged, contact your purchase point or the Manufacturer and provide the identification data of your device to obtain a replacement copy.

1. GENERAL INFORMATION

1.1. Safety

Compliance with the Manual is essential for ensuring the correct functioning of the fireplace insert and avoiding damage and accidents caused by improper use.

1.1.1. Please observe the following safety rules:

- before installing the insert or performing any maintenance work on it, make sure that you have read and understood the Operation and Installation Manual;
- the fireplace insert should be installed at the most convenient location and in conformity with the applicable construction and fire prevention laws; this product has been approved AS/NZS2918 AS/NZS2018
- installation, maintenance and operation control activities may only be performed by qualified specialists;
- the device may only be used in accordance with its intended purpose;
- **it is absolutely necessary to provide the installation site with appropriate ventilation and air intake sources;**
- check the permissible load carrying capacity of the substructure (floor, ceiling) at the intended location of the insert (taking into account the total weight of the insert and its encasing);
- provide an appropriate installation in accordance with the installations specification provided. Please refer approvals AS/NZS2918 AS/NZS2018

- avoid installation in rooms with B type gas devices, hoods (with or without exhaust), heat pumps, collective ventilation conduits or multiple flue pipes; the insert must not be fitted in the vicinity of the staircase or rooms with appliances capable of creating negative pressure;
- avoid direct contact with the insert (it becomes very hot during use) and wear suitable protective equipment (protective clothing or heat-resistant gloves);
- if you encounter any problems, please contact your point of purchase or the Manufacturer (and always request original spare parts for repairs);

1.1.2. Never:

- lean on the fireplace insert or climb onto it;
- use the appliance in the event of fault or malfunctioning;
- place flammable materials closer than 1.5 m to the fireplace;
- light the fire with flammable materials or burn waste in the fireplace.

1.1.3. The manufacturer is released from civil or criminal liability in the case when:

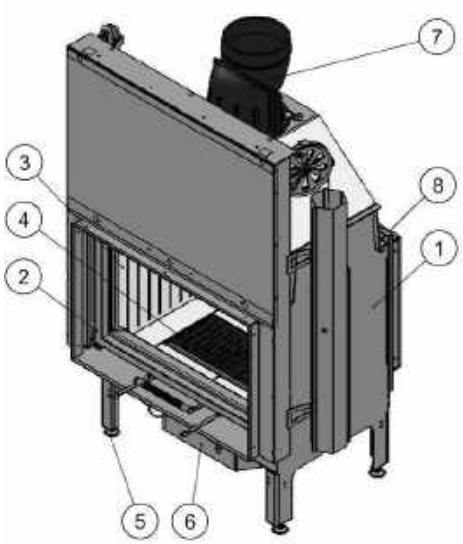
- the insert is not used in accordance with the *Operation and Installation Manual;*
- the fireplace insert is modified or its parts are replaced with non-original parts in an authorized manner (any such modification or replacement immediately renders the guarantee null and void);
- incorrect installation or improper maintenance (non-compliant with the *Operation and Installation Manual*) lead to injuries or damage to property.

2. IINTENDED USE OF THE INSERT

Hestia fireplace inserts are intended for use as an additional source of indoor heat. They are equipped with slow-burning hearth and manual loading of fuel and are closed with a standard guillotine-type door (a pull-down door).

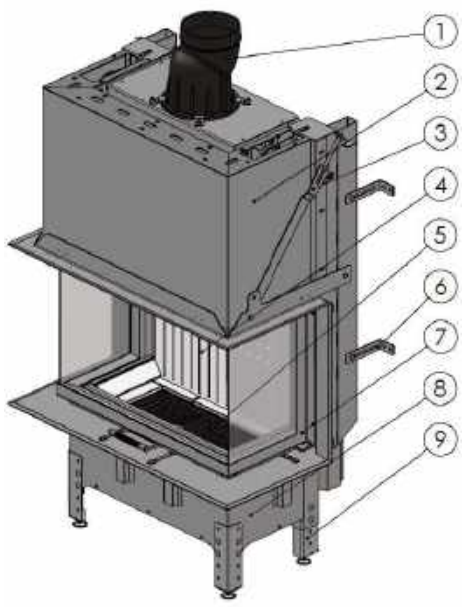
Good quality wood is the most important factor in your appliance working efficiently and cleanly. Always use dry split hardwood firewood (moisture content of 20% or less). The dryness of the firewood plays an important role because the use of wet wood results in poor fuel economy and may cause a tarry sooty film on the internals of the stove.

Newly cut wood contains 60–70% water, making it totally unsuitable for use as firewood;it should be stacked and air dried under cover for two years before being used as firewood. Do not burn liquid fuels, drift wood, finished, swan wood, pallet wood, chipboard/plywood, varnished wood or plastic coated wood, wood treated with preservatives, or house hold waste.



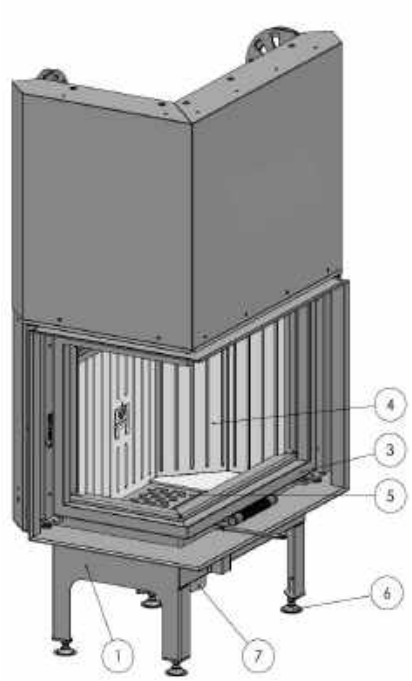
1 – body of the insert; 2 – front panel type guillotine; 3 – panels from ceramic accumulation concrete; 4 – iron grate; 5 – regulated legs; 6 – expansion box with air supply tube; 7 – out flue; 8 – back doors type standard (service).

Figure 1. Fireplace insert HESTIA Range with one sided guillotine doors



1 – out flue; 2 – body of the insert; 3 – joist; 4 – panels from ceramic accumulation concrete; 5 – iron grate and ash pan; 6 – bracket; 7 – front panel type guillotine; 8 – bottom cover of the insert; 9 – regulated foot.

Figure 2. Fireplace insert Hestia Bay Guillotine



1 – shell of the insert; 2 – door-type front; 3 – guillotine-type front, 4 – akubet (a kind of chamotte) panels; 5 – grate and ash pan; 6 – regulated foot; 7 – air supply pipe

Figure 3. Fireplace insert Hestia Guillotine Left/Right

3.TECHNICAL DATA

Parameters	Symbol	Unit.	Fireplace insert HESTIA – one sided guillotine doors			
			Hestia 1000 Guillotine GF	Hestia 1000 Guillotine L/R	Hestia 1200 Guillotine GF	Hestia 1400 Guillotine GF
Nominal power	P	[kW	16	19	19	22
Range of heating power	P_{og}	[kW]	8-19	9-23	9.5-24.5	11-28.5
Maximum fuel load wight	C	[kg]	4.15	6.02	4.4	4.9
Avarage fuel consumption	B	[kg/h]	4.3	8.16	5.9	6.6
Thermall efficiency	η	[%]	81.1	81.6	75.5	79
CO emmision (with 13% O_2)	CO_{13}	[%]	0.063	0.096	0.0973	0.0662
Dust emmision (with 13% O_2)	E_p	[g/m^3]	0.033	0.029	0.035	0.038
Avarage temperature of the fumes	$t_{śr}$	[^{o}C]	318	314	288	283
Minimum active field of inlet vents	A_{wy}	[cm^2]	1000	1000	1330-1520	1540-1760
Maximum active field of outlet vents	A_{wl}	[cm^2]	800	800	760-1240	880-1430
Flue pipe diameter	D_{cz}	[mm]	200	220	200	200
Inlet pipe diameter	D_d	[mm]	125	150	125	125
Glass dimmensions	Sz	[mm]	680x430	900x415x375	1050x430	1200x430
Weight	m	[kg]	223	202	409	435
Class of the fireplace			1C	1C	1C	1C
Maximum lenght of logs (with diameter 25 to 30 cm)	l_p	[cm]	30	30	30	30
IloNumber of logs for one loading		[pcs]	6	6	6	6
Fuel type	recommended seasoned deciduous wood (beech, birch, hornbeam)					
Fuel humidity	between 12 and 20 %					

Table 1. Technical data of fireplace inserts with one sided guillotine doors.

Parameters	Symbol	Unit.	Fireplace insert HESTIA – two sided doors (front guillotine, back standard)	
			Hestia 1200 Guillotine Tunnel	Hestia 1400 Guillotine Tunnel
Nominal power	P	[kW	20	22
Range of heating power	P_{og}	[kW]	10-26	11-28.5
Maximum fuel load wight	C	[kg]	4.5	5.1
Avarage fuel consumption	B	[kg/h]	6	6,8
Thermall efficiency	η	[%]	78	76.5
CO emmision (with 13% O_2)	CO_{13}	[%]	0.0406	0.0345
Dust emmision (with 13% O_2)	E_p	[g/m^3]	0.036	0.036
Avarage temperature of the fumes	$t_{śr}$	[^{o}C]	290	301
Minimum active field of inlet vents	A_{wy}	[cm^2]	1400-1600	1540-1760
Maximum active field of outlet vents	A_{wl}	[cm^2]	800-1300	880-1430
Flue pipe diameter	D_{cz}	[mm]	200	200
Inlet pipe diameter	D_d	[mm]	125	125
Glass dimmensions	Sz	[mm]	1050x430	1200x430
Weight	m	[kg]	395	421
Class of the fireplace			1C	1C
Maximum lenght of logs (with diameter 25 to 30 cm)	l_p	[cm]	30	30
IloNumber of logs for one loading		[pcs]	6	6
Fuel type	recommended seasoned deciduous wood (beech, birch, hornbeam)			
Fuel humidity	between 12 and 20 %			

Table 2. Technical data of fireplace inserts with two sided doors (front guillotine, back standard).

Parameters	Symbol	Unit.	Fireplace insert HESTIA – three sided guillotine door	
			Hestia 1000 Guillotine Peninsula	Hestia 1000 Guillotine Bay
Nominal power	P	[kW	12	12
Range of heating power	P_{og}	[kW]	6-15.5	6-15.5
Maximum fuel load wight	C	[kg]	2.8	2.5
Avarage fuel consumption	B	[kg/h]	3.7	3.3
Thermall efficiency	η	[%]	78	78
CO emmision (with 13% O_2)	CO_{13}	[%]	1.133	0.0792
Dust emmision (with 13% O_2)	E_p	[g/m^3]	0.038	0.035
Avarage temperature of the fumes	$t_{śr}$	[^{o}C]	239	222
Minimum active field of inlet vents	A_{wy}	[cm^2]	840-960	840-960
Maximum active field of outlet vents	A_{wl}	[cm^2]	480-780	480-780
Flue pipe diameter	D_{cz}	[mm]	200	200
Inlet pipe diameter	D_d	[mm]	150	150
Glass dimmensions	Sz	[mm]	540x800x530	800x350x530
Weight	m	[kg]	324	384
Class of the fireplace			1b	1b
Maximum lenght of logs (with diameter 25 to 30 cm)	l_p	[cm]	35	45
IloNumber of logs for one loading		[pcs]	2	3
Fuel type	recommended seasoned deciduous wood (beech, birch, hornbeam)			
Fuel humidity	between 12 and 20 %			

Table 3. Technical data of fireplace inserts with three sided doors

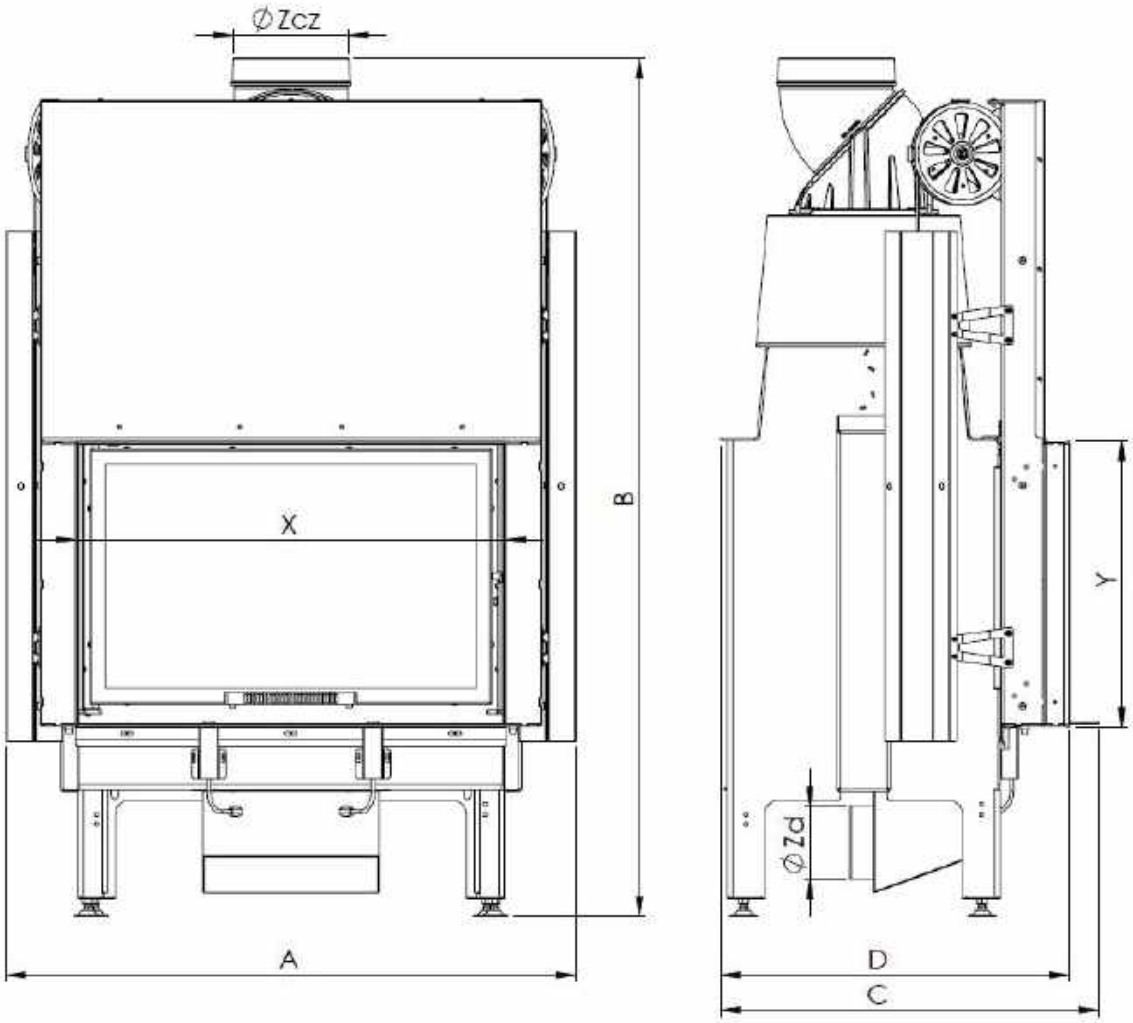


Figure 4. The basic dimensions of Hestia fireplace inserts with a guillotine door.

Dimensions [mm]	The basic dimensions of Hestia fireplace inserts with a guillotine door	
	Hestia 1200 Guillotine GF	Hestia 1400 Guillotine GF
A	1324	1474
B	1604	1604
C	660	662
D	595	595
X	1105	1254
Y	492	492
ØZcz	200	200
ØZd	125	125

Table 4. The basic dimensions of Hestia fireplace inserts with a guillotine door.

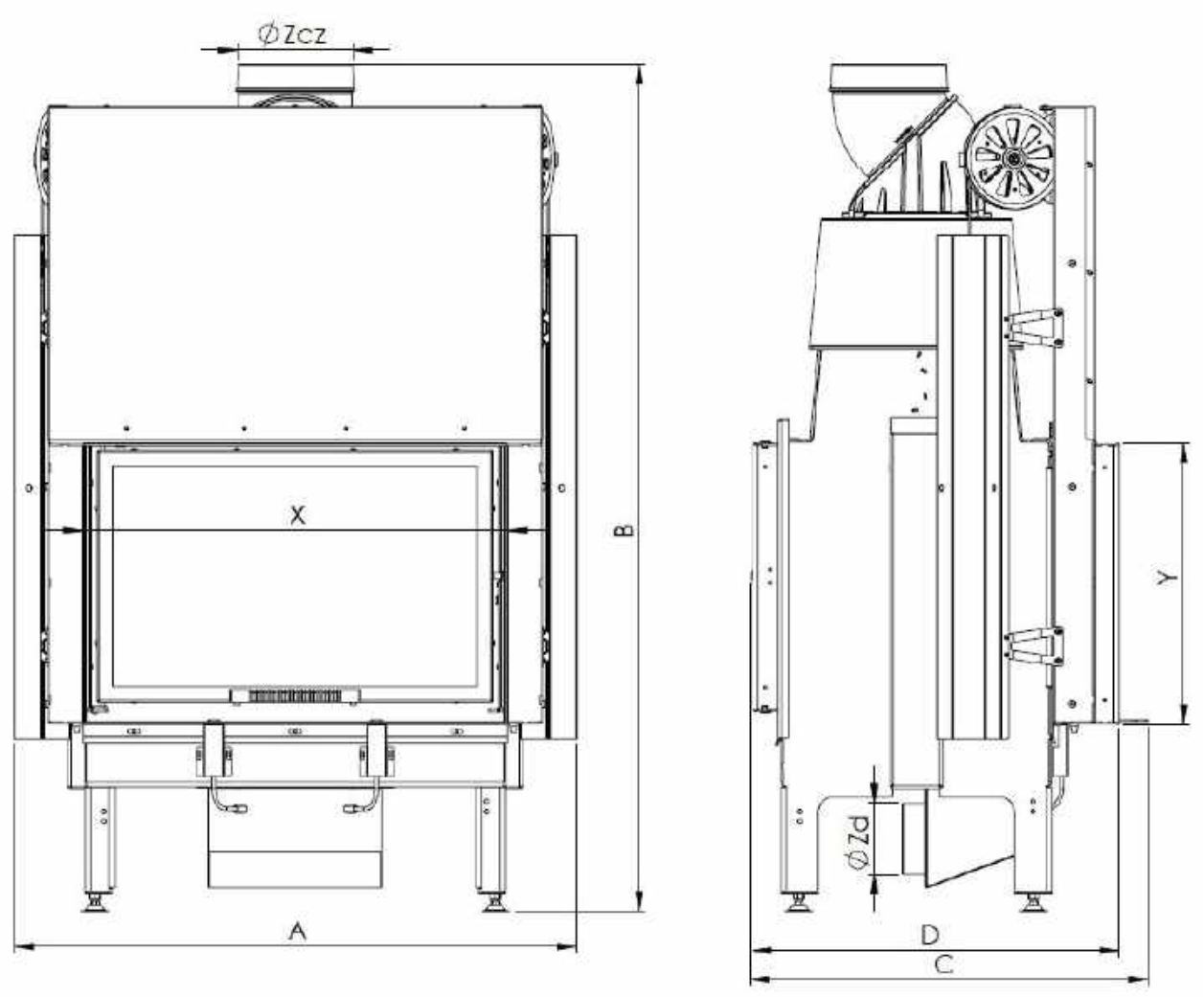


Figure 5. The basic dimensions of Hestia fireplace inserts with two sided doors: front guillotine and back standard.

Dimensions [mm]	The basic dimensions of Hestia fireplace inserts with a guillotine door	
	Hestia 1200 Guillotine Tunnel	Hestia 1400 Guillotine Tunnel
A	1324	1474
B	1604	1604
C	708	708
D	634	634
X	1105	1254
Y	492	492
ØZcz	200	200
ØZd	125	125

Table 5. The basic dimensions of Hestia fireplace inserts with two sided doors: front guillotine and back standard.

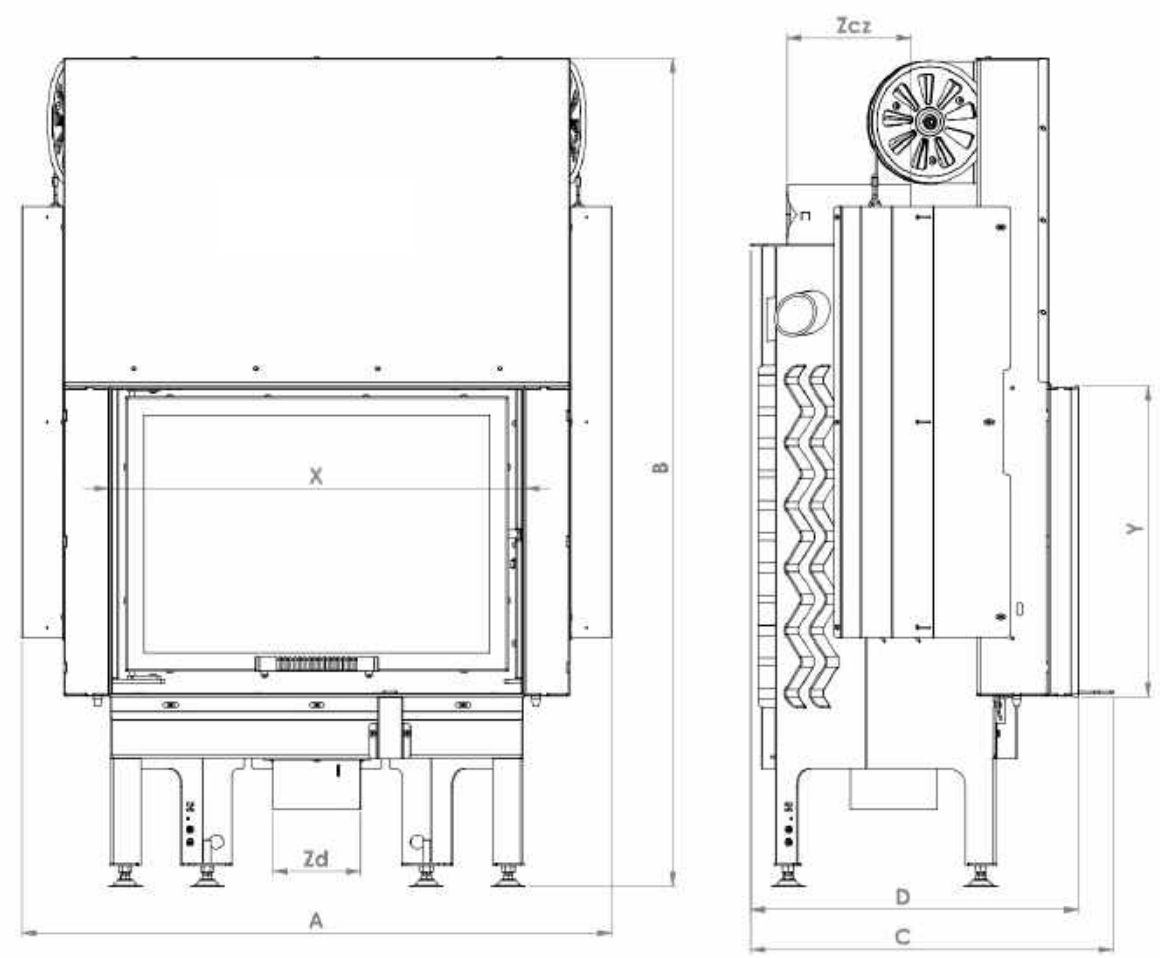


Figure 6. The basic dimensions of Hestia fireplace inserts with guillotine type door

Dimensions [mm]	The basic dimensions of Hestia fireplace inserts with a guillotine door
	Hestia 1000 Guillotine Glass Fronted
A	983
B	1431
C	575
D	525
X	733
Y	587
ØZcz	198
ØZd	125

Table 6. The basic dimensions of Hestia fireplace inserts with guillotine type door

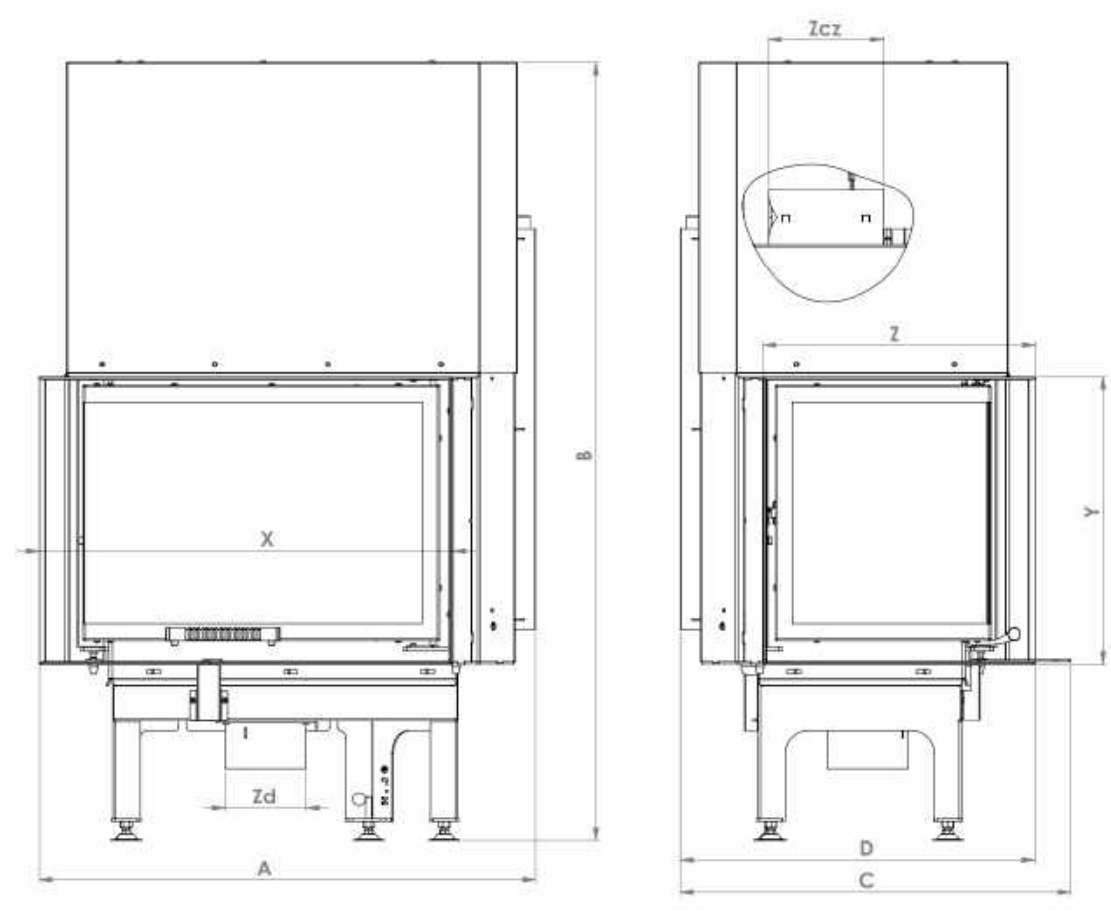


Figure 7. The basic dimensions of Hestia fireplace inserts with guillotine-type doors (LEFT-sided)

Dimensions [mm]	The basic dimensions of Hestia fireplace inserts with a guillotine left
	Hestia 1000 Guillotine Left
A	1124
B	1324
C	655
D	600
X	996
Y	471
z	472
ØZcz	218
ØZd	147

Table 7. The basic dimensions of Hestia fireplace inserts with guillotine type door (left Sided)

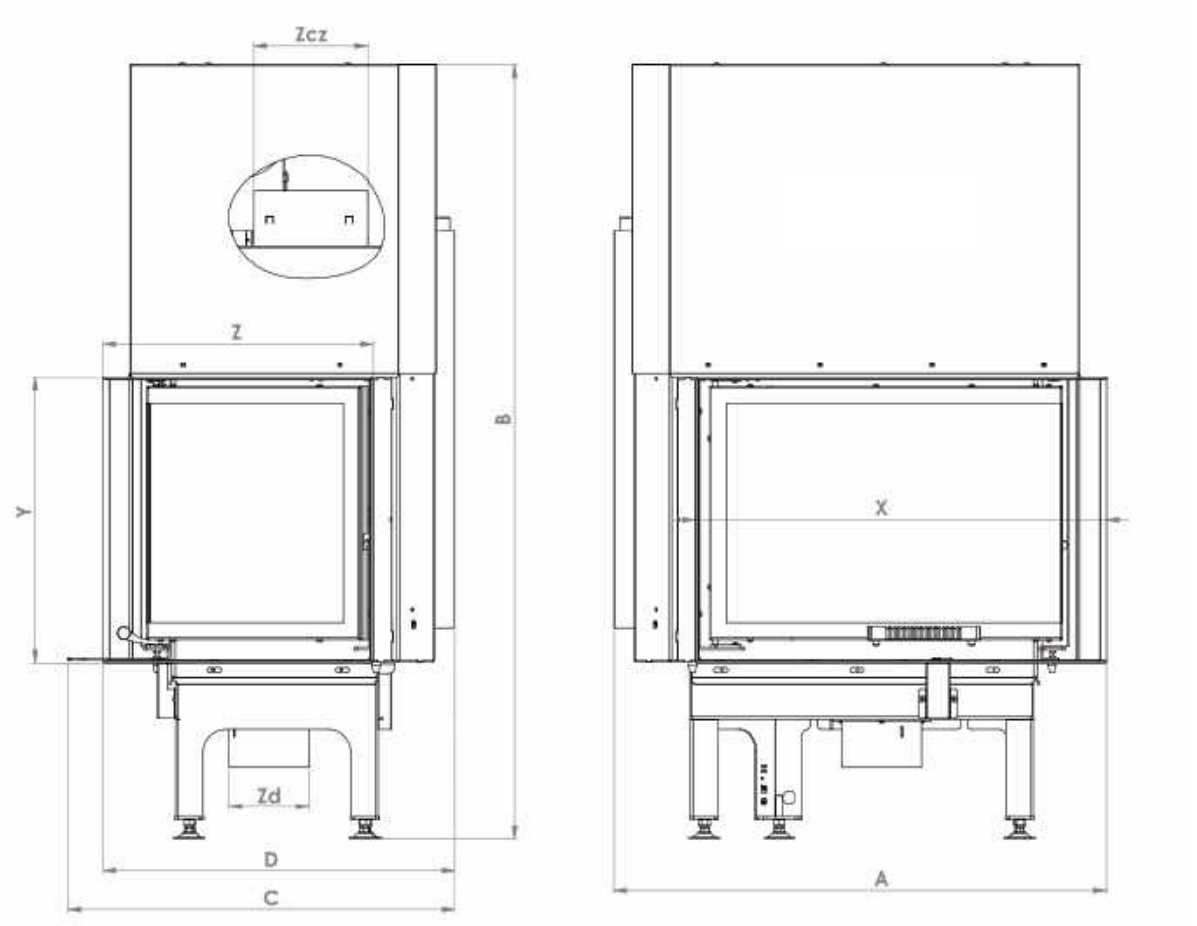


Figure 8. The basic dimensions of Hestia fireplace inserts with guillotine-type doors (Right-sided)

Dimensions [mm]	The basic dimensions of Hestia fireplace inserts with a guillotine right
	Hestia 1000 Guillotine Right
A	1124
B	1324
C	655
D	600
X	996
Y	471
z	472
ØZcz	218
ØZd	147

Table 8. The basic dimensions of Hestia fireplace inserts with guillotine type door (right Sided)

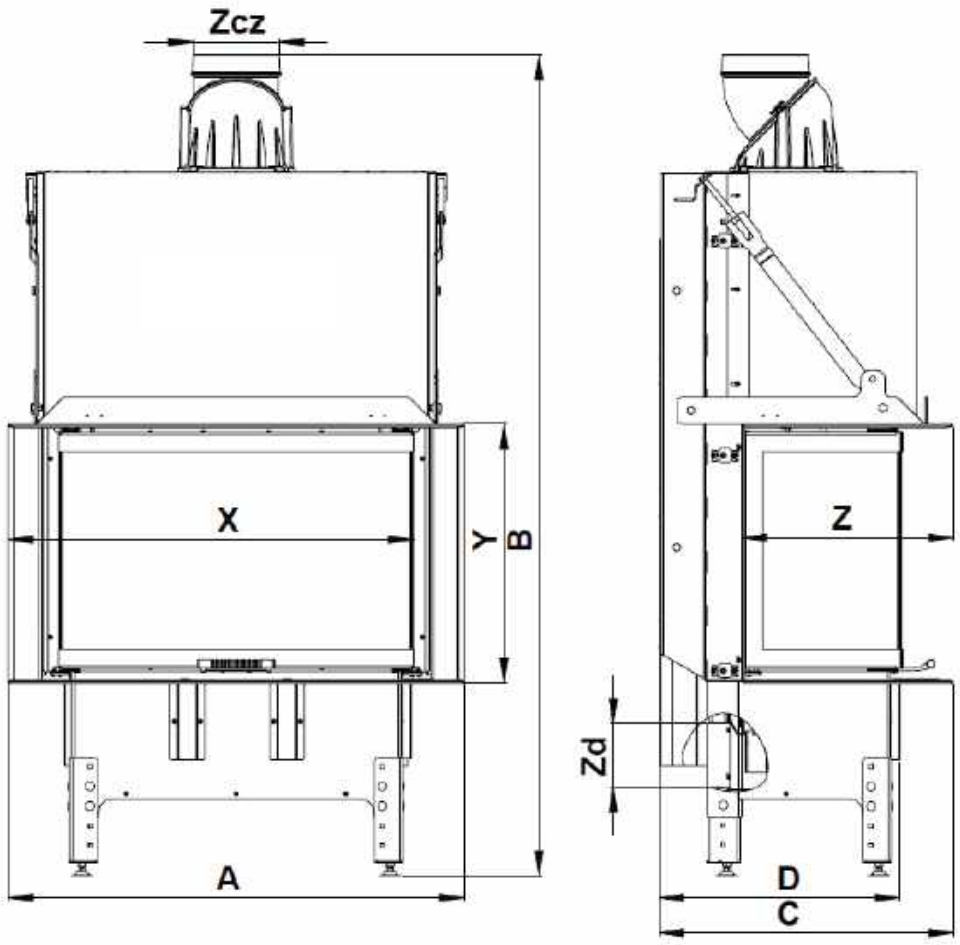


Figure 9. The basic dimensions of Hestia fireplace inserts with three sided guillotine doors

Dimensions [mm]	The basic dimensions of Hestia fireplace inserts with three sided guillotine doors
	Hestia 1000 Guillotine Bay
A	1041
B	1871
C	670
D	549
X	924
Y	590
z	482
ØZcz	200
ØZd	150

Table 9. The basic dimensions of Hestia fireplace inserts with three sided guillotine doors

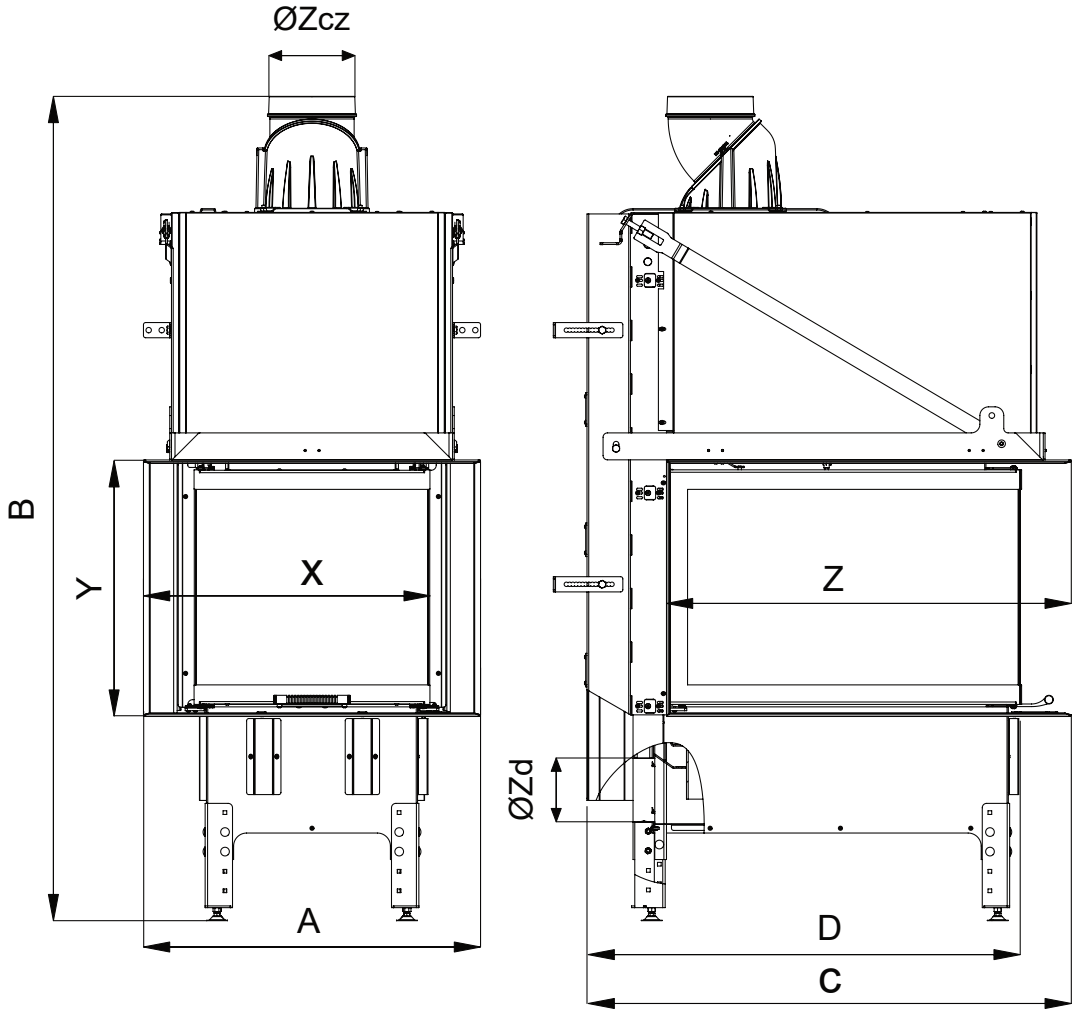


Figure 10. The basic dimensions of Hestia fireplace inserts with three sided guillotine door

Dimensions [mm]	The basic dimensions of Hestia fireplace inserts with three sided guillotine doors
	Hestia 1000 Guillotine Peninsula
A	777
B	1897
C	1115
D	994
X	665
Y	590
z	932
ØZcz	200
ØZd	150

Table 10. The basic dimensions of Hestia fireplace inserts with three sided guillotine door

4. STRUCTURE AND OPERATION OF THE INSERT

4.1 Hestia insert single sided guillotine door (Hestia 1200 and 1400 series)

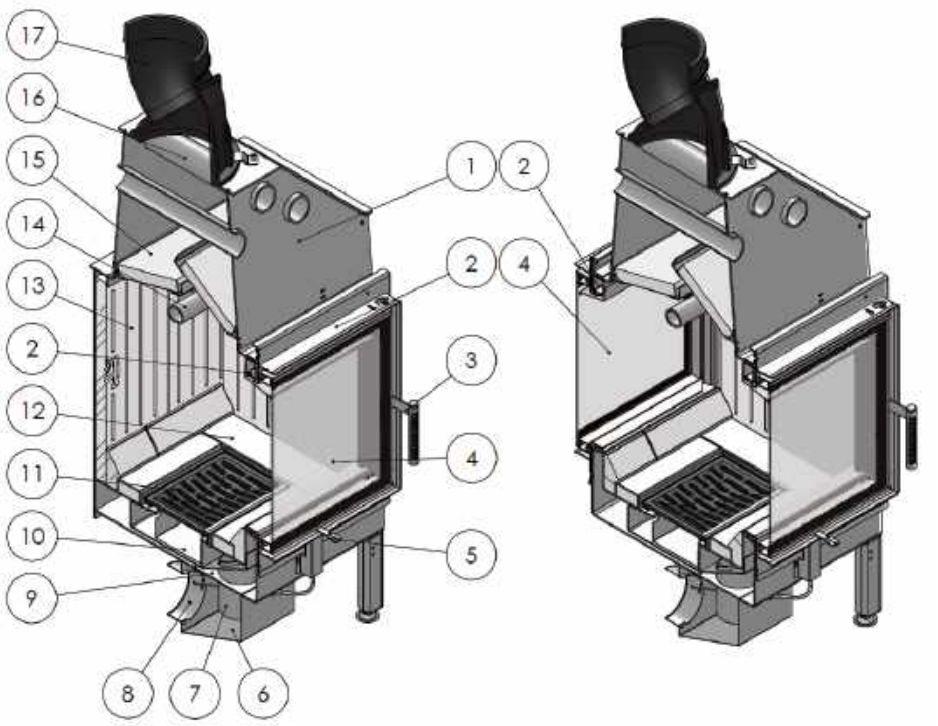


Figure 11. General construction of HESTIA insert single sided guillotine door (Hestia 1200 and 1400 series)

The fireplace insert consists of a body 1 and a front 4. The body (coat of the insert) is made of 4 mm steel.

The front of the insert consists of steel door made of a special profile and profiled steel metal sheet, heat-resistant glass and a handle 3. The door is screwed to the bars 2, which are fastened to the body of the insert.

The front comes as a guillotine - the door is raised up and down. The configuration of the coats also occurs in two configurations. Double-sided, where the steel door is located on the front and rear of the insert, replacing the rear part of the chamber and one-sided, where the door is located only at the front.

The combustion chamber 12 is lined with the ceramic concrete 13 on the bottom, side walls and back wall (for single-sided models only). It is made of a double-walled floor 9 which is the intake of primary and secondary air, as well as the location of the ash pan 10 and grate 11. The air inlet 8 is realized through a spigot of 125 mm diameter and an expansion box 6 distributing air to the individual primary and secondary air intake pipes 7. Thanks to this solution, the insert needs only one pipe supplying air from the outside.

The throttles are regulated by levers 5 located under the front. To regulate them, turning the lever to the right or left. In the maximum right lever position, the air supply is cut off and in the left position, the maximum air supply is opened.

The primary air, passing the throttle, goes to the ash pan 10 and then to the grate 11. And through slots in the grate, it reaches the combustion chamber.

The secondary air enters the combustion chamber through the afterburner 14, that is, pipes with openings located in the upper part of the combustion chamber. The insert is also equipped with an air curtain to keep the glass pane clean (double-sided inserts have air curtains on both sides).

Above the combustion chamber, there are special ceramic concrete panels called 15 deflectors (each HESTIA 1400 and 1200 series insert in has 2 deflectors).

Radiators (pipes) 16 are welded to the body of the insert. The radiators and deflector create a convective channel enhancing heat exchange. During combustion, the combustion gases float around the walls of the combustion chamber, the deflector, and horizontal radiators. Then they get out to the flue 17 and through the wires go to the chimney.

The air surrounding the built-in insert is heated (convection) and escapes into the room through the appropriate ventilation slots in the fireplace encasing - heat recovery and additional room heating.

4.2 Hestia single sided guillotine door (Hestia 1000 Guillotine GF)

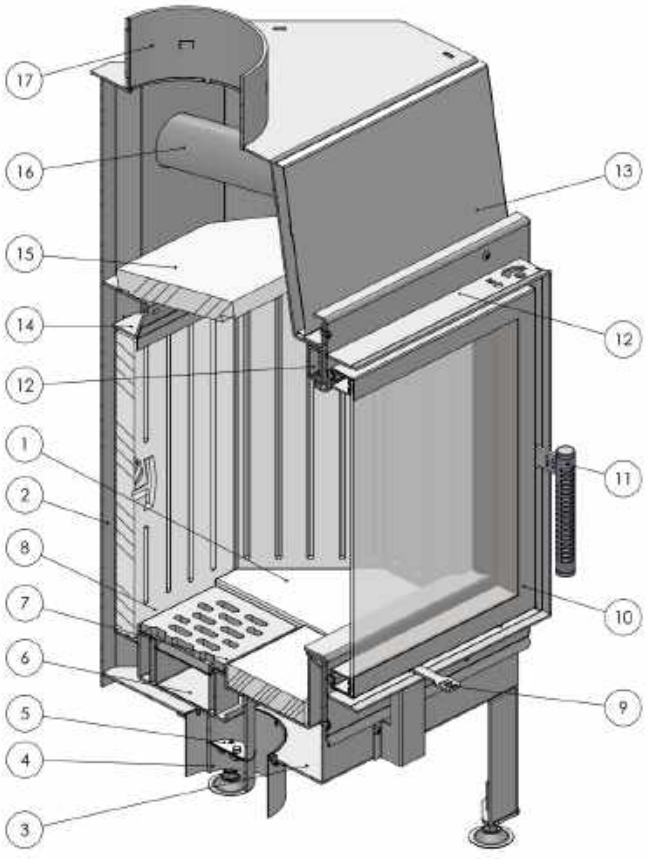


Figure 12. General structure of the Hestia 1000 Guillotine glass fronted

The fireplace insert consists of a body 2 and of a front 10. The body (shell) is made up of 3mm thick steel.

The front panel consists of a steel door made from a special profile and profiled steel sheet metal, heat-resistant glass and a handle 11. The handle has been specially designed to remain cool when the fireplace burns. The door is screwed to the bars 12, which are fastened to the body of the insert.

The front is available in two options. The first one is a hinged door opening to the right or left, the second one is a guillotine-type door which can be lifted upwards.

The bottom of the combustion chamber 1, its side walls and the back wall are lined with akubet (a kind of chamotte) 8. It has a double floor 3 with primary and secondary air inlets, as well as an ash pan 6 and a grate 7. Air inlet 4 is provided through a connection pipe with a diameter of 125mm, which incorporates an additional connection pipe with a diameter of 60mm, and a mechanism regulating the flow of air – throttle 5. With such a solution, the insert needs only one pipe for supplying air from outside.

The throttle is regulated with a lever 9 installed under the front panel. The throttle is regulated by turning the lever to the right or to the left. When the lever is placed in its rightmost position, the inflow of air is cut off. The maximum inflow of air can be ensured by moving the lever to its leftmost position.

After passing through the throttle, the air finds its way to the ash pan 6 and then to the grate 7. The air is directed to the combustion chamber through slots in the grate.

Secondary air enters the combustion chamber through the combustion gas after-burning system 14, i.e. through apertures in the rear top part of the shell and through apertures made in the chamotte (akubet) lining (in some insert models). The insert is also equipped with an air curtain which reduces soot deposition on the glass pane, which ensures a “clean glass” effect.

Above the combustion chamber, there is a special akubet plate called a deflector 15. Some insert models have two deflectors.

The decorative masking frame 13 should be removed during the installation of the fireplace insulation (the masking frame is a non-detachable part and has a guillotine-type door, like the insert itself). Radiators (pipes) 16 are welded to the body of the insert. The radiators and the deflector form a convection channel, which optimizes the heat exchange. During the burning process, combustion gases float around the walls of the combustion chamber, the deflector and the horizontal radiators. Then they pass through the flue 19 and the ducts and finally reach the chimney.

The air surrounding the encased insert is heated (by convection) and escapes into the room through appropriate ventilation slots in the encasing of the fireplace. This ensures heat recovery and provides an additional source of indoor heating.

4.3 Hestia three sided guillotine door

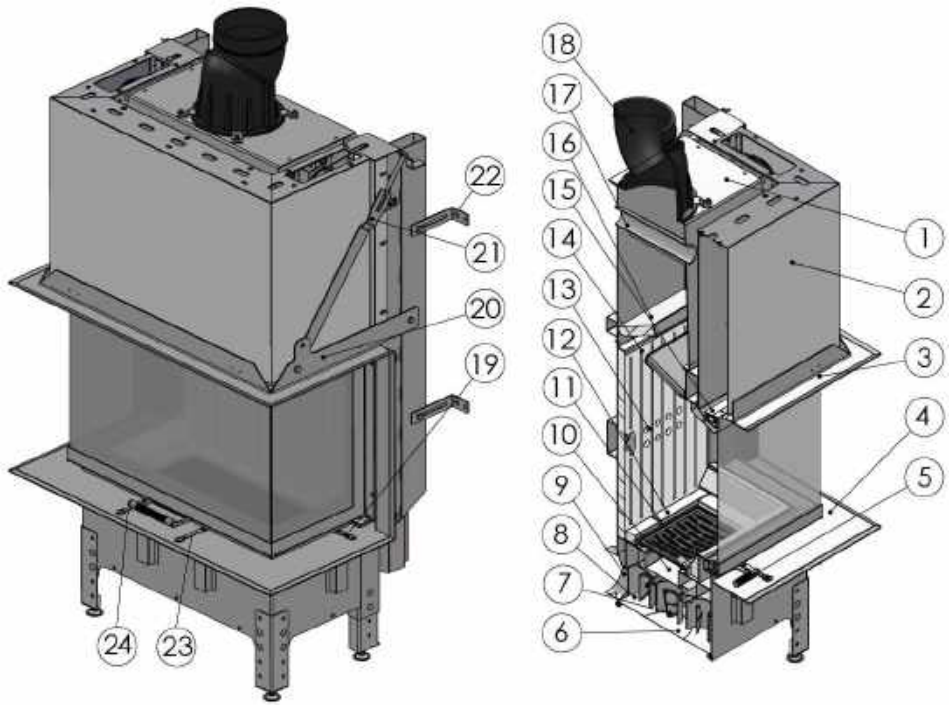


Figure 13. General construction of Hestia three sided guillotine door

The fireplace insert consists of a body 1 and a front 4. The body of the insert is made of 3 mm P265GH boiler steel. It is enclosed with the cover 2 and lower and upper bar 3. The front of the insert consists of steel door made of a special profile and profiled steel metal sheet, heat-resistant glass and a handle 5. The door is screwed to the bars 15, which are fastened to the body of the insert.

The front is available in the guillotine option - the door is raised upwards with the possibility of opening the side door by wing (the opening of the side door is used only to service the insert).

The combustion chamber 12 is lined with the ceramic concrete 14 on the bottom and back wall. It is made of a double-walled floor which is the intake of primary and secondary air, as well as the location of the ash pan 10 and grate 11. The air inlet 9 is realized through a spigot of 150 mm diameter and an expansion box 8 distributing air to the individual primary, secondary and support air intake pipes 7. Thanks to this solution, the insert needs only one pipe supplying air from the outside.

In addition, the insert is equipped with a bottom cover 6 for mounting the air inlet from below.

The throttles are regulated by levers located under the front (primary 23 and secondary air 23) and under the side door 19 (primary air supporting and cleaning the glass). To regulate them, turning the lever to the right or left.

The maximum right lever position, the air supply is cut off and in the left position, the maximum air supply is opened.

The primary air, passing the throttle, goes to the ash pan 10 and then to the grate 11. And through slots in the grate, it reaches the combustion chamber.

The secondary air enters the combustion chamber through the afterburner 13, that is, openings located in the ceramic concrete panels. The insert is also equipped with an air curtain and additional throttle for faster burning and to keep the glass pane clean.

Above the combustion chamber, there are special ceramic concrete panels called 16 deflectors (each three sided guillotine door fireplace series insert has 2 deflectors).

Radiators (pipes) 17 are welded to the body of the insert. The radiators and deflector create a convective channel enhancing heat exchange. During combustion, the combustion gases float around the walls of the combustion chamber, the deflector, and horizontal radiators. Then they get out to the flue 18 and through the wires go to the chimney.

The insert is equipped also with the tension 21 of the upper strip which assists in relieving the front of the insert, bracket 22 for mounting the insert to the wall and in the case of a heavier installation, a fixing hole in the upper strip 20 allowing to attach the insert to the ceiling. Both of these solutions prevent deformation of the insert during assembly of heavier buildings and its future work.

The air surrounding the built-in insert is heated (convection) and escapes into the room through the appropriate ventilation slots in the fireplace encasing - heat recovery and additional room heating.

5. DOOR OPENING AND CLOSING

A. Hestia insert single sided guillotine door (Hestia 1200 and 1400 series)

5.1. Guillotine type with lever (sideways)

The guillotine door, in addition to up-down shifting, can also be opened sideways in selected Hestia models.
Side ways opening is used only to service the insert (cleaning the glass, etc.). It is not intended for everyday use.
In order to open the door sideways:

- pull the guillotine door completely down until it touches the adjusting screws to the end stop of the gantry;
- press the lever protruding from the side of the wall down - release the door bolt in the lock (the lever is on the right or left side of the insert);
- open the door by holding the handle;
- After opening the door, you can start maintenance or cleaning the insert.

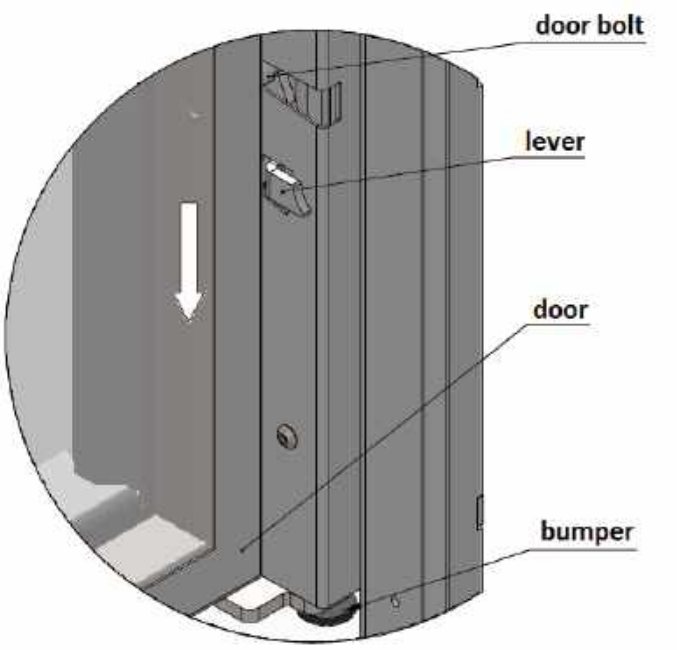


Figure 14 Guillotine type door - opening.

Closing the door of the insert consists in:

- execution of the swinging movement and pressing the door - the bolt jumps into the lock, then the door should be raised up with simultaneous pressing (until you hear the characteristic clicking sound). When lifting, hold the handle.

ATTENTION!
Do not slam the door when closing - this may cause the glass crack or break.

5.2. Rear in a two-sided insert (hinged)

The rear door can be also set ajar to yourself to clean the glass pane in selected models (HESTIA 1400 and 1200 range). **The hinged opening is used only to service the insert (cleaning the glass pane, etc.). It is not intended for everyday use.**
In order to open the door:

- hooks protruding at the top of the door pull towards yourself - release the door from the handle;
- open the door slowly, holding it while opening by the upper part to the end of the opening stops; after opening the door, you can start maintenance or cleaning the insert.

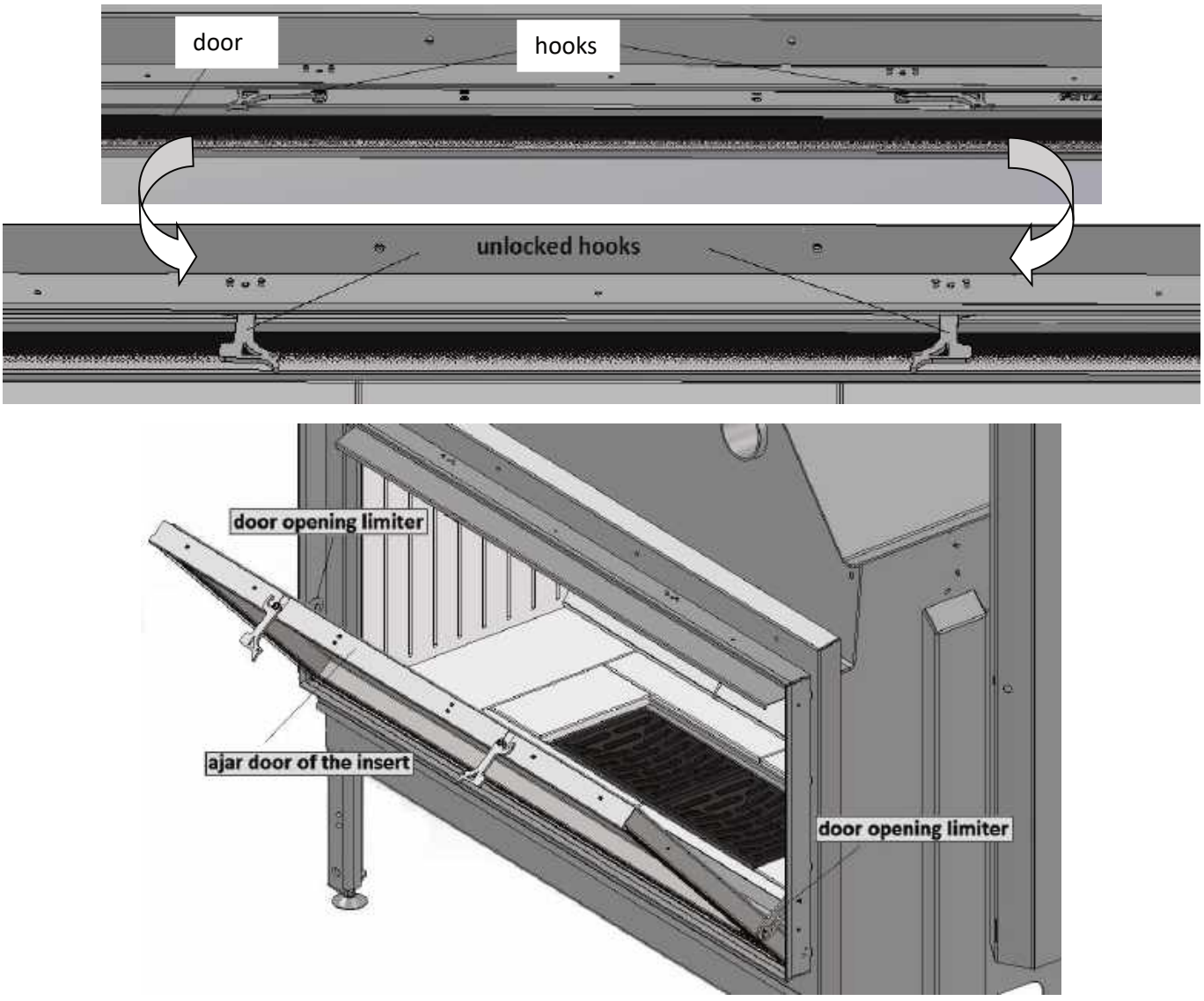


Figure 15. Hinged type door – opening

Closing the door of the insert consists in:

- restore the door to its initial position;
- move the hooks right and left side so that their position is parallel to the insert - fixing the door in the handles;

ATTENTION!
Do not slam the door when closing - this may cause the glass crack or break.

5.4. Type guillotine with a key

Larger models with a guillotine door, in addition to up-down shifts, can be also pulled down to clear the glass pane in selected models (Hestia 1200 and 1400 Guillotine Tunnel).

The hinged opening is used only to service the insert (cleaning the glass, etc.). It is not intended for everyday use.

In order to open the door:

- unlock the lock located in the central part of the door above the glass, turning it with the key to the right -release the door from the handle;
- open the door slowly, holding it while opening by the upper part to the end of the opening stops; after opening the door, you can start maintenance or cleaning the insert.

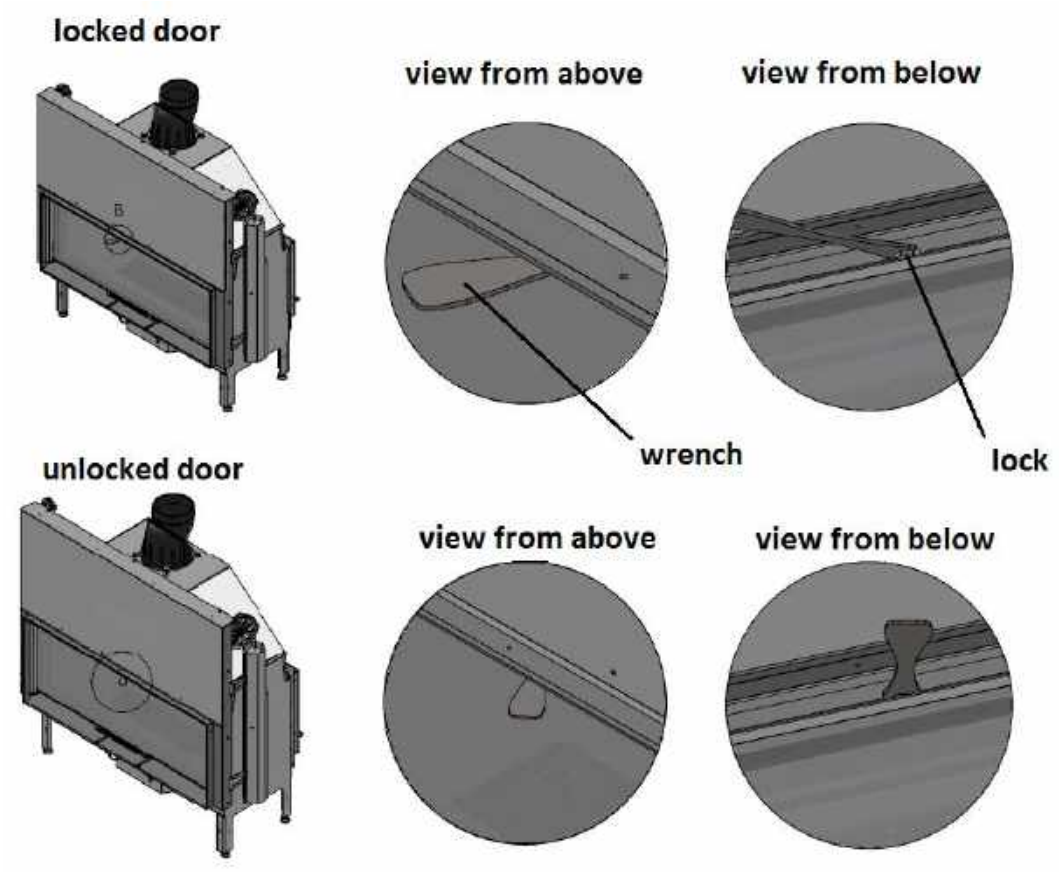


Figure 16. Guillotine type door – opening Closing

the door of the insert consists in:

- execution of the swinging movement and pressing the door - the bolt jumps into the lock, then the door should be raised up with simultaneous pressing (until you hear the characteristic clicking sound). When lifting, hold the handle.

ATTENTION!
Do not slam the door when closing - this may cause the glass crack or break.

B. Hestia insert single sided guillotine door (Hestia 1000 Guillotine GF, Left and Right)

A guillotine-type door can be moved up or down. It also opens sideways.

To open the door sideways (e.g. for the purpose of cleaning the insert after use), do the following:

- in the case of a guillotine-type door, move the door to its lowest position until it touches the adjustment screws on the stopper of the sliding device;
- press down the lever protruding from the side of the wall to release the pin in the door lock (the lever is on the right or left side of the insert);
- open the door holding the handle;

after opening the door, perform maintenance activities or clean the insert.

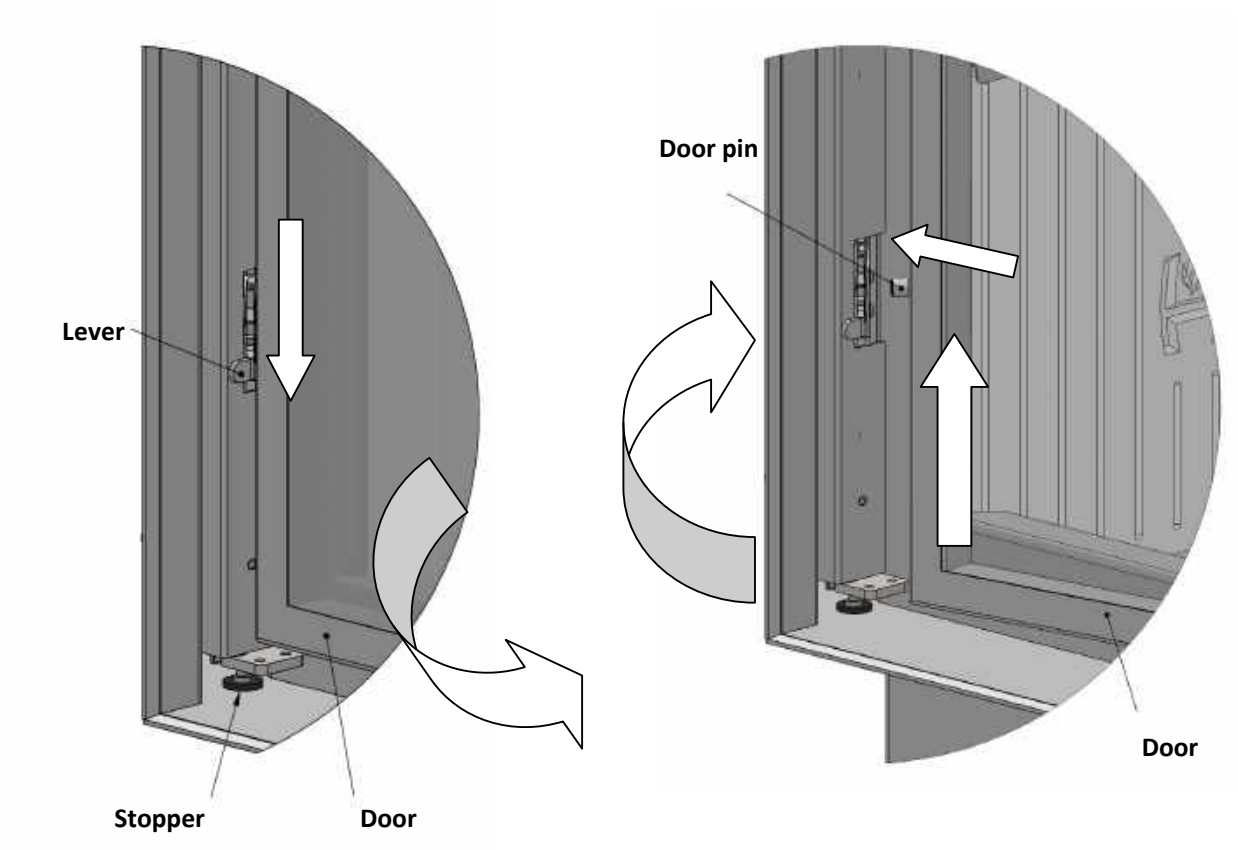


Figure 17. Guillotine-type door – the opening and closing of the door

The door of the insert is closed in the following way:

- by performing a swinging movement and pressing the door down - the pin will click into its place in the lock, then lift the door upwards, simultaneously pressing it down (until you hear a characteristic clicking sound). Hold the handle when lifting the door.

ATTENTION!
Do not slam the door when closing - this may cause the glass crack or break.

C. Hestia insert three sided guillotine door (Hestia 1000 Guillotine Bay and Peninsula)

5.5. Guillotine type with hooks (sideways)

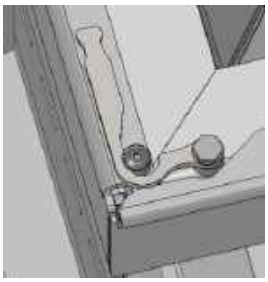
The guillotine door, in addition to up-down shifting, can also be opened sideways.

Sideways opening serves only to service the insert (cleaning the glass pane, etc.). It is not intended for everyday use. In order to open the door:

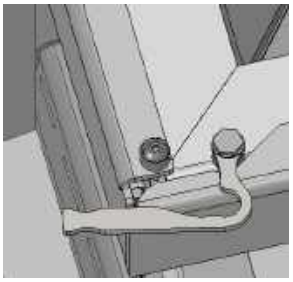
- pull tabs protruding in the corners of the guillotine - release the door from the handle;
- open slowly pulling the door towards you;

After opening the door, you can start maintenance or cleaning the cartridge.

ATTENTION!
The doors open at an angle, the attempt of wider opening by force may lead to their damage.



Closed hook



Open hook

Figure 18. Side doors- opening and closing

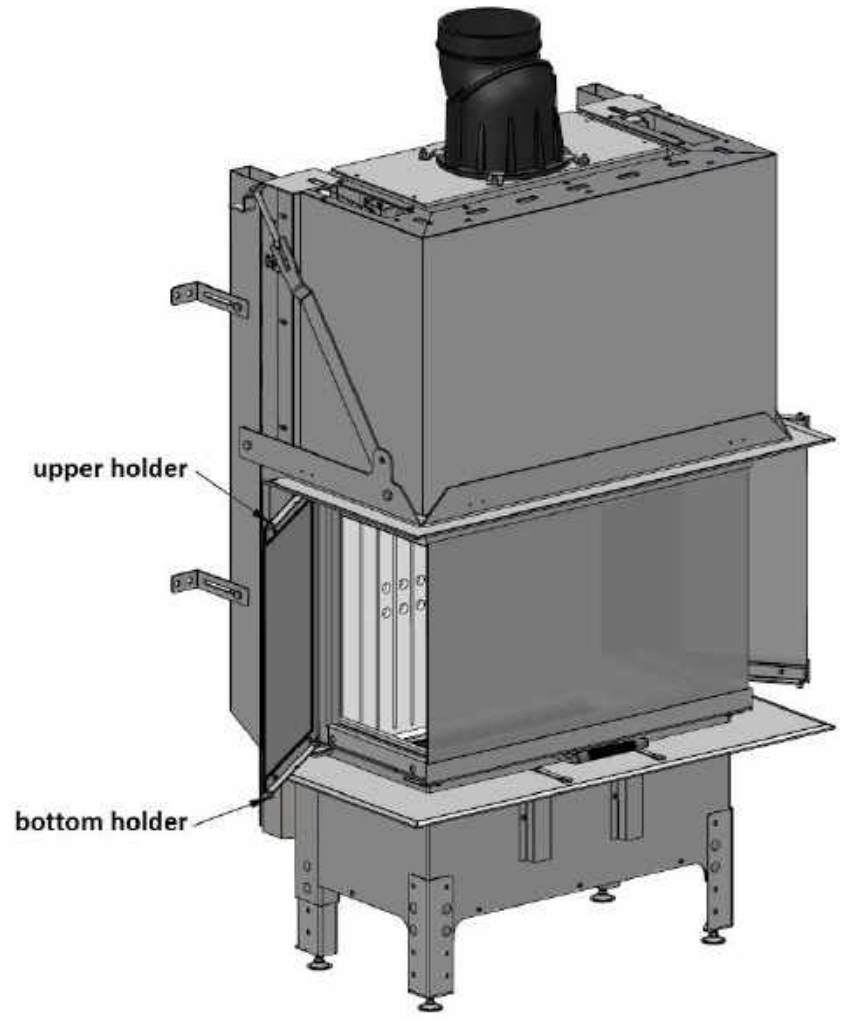


Figure 19. Side door unlocked

Closing the door of the insert consists in:

- returning the door to the initial position;
- moving the hooks to the initial position - fixing the door in the holder;

ATTENTION!
Do not slam the door when closing - this may cause the glass crack or break.

6. TRANSPORT, ASSEMBLY AND INSTALLATION OF THE INSERT

Before assembling, installing and using the fireplace insert, read the *Operation and Installation Manual* carefully and follow the instructions contained in it. It will ensure safe and efficient operation of the fireplace. Non-compliance with this *Operation and Installation Manual* may invalidate the guarantee and put the user at risk of injury or loss of life.

The product must be assembled, installed and used in accordance with the standards, including in particular:

The fireplace insert must be installed by a qualified person or company and commissioning checks must b e performed by a master chimney sweep and a fire prevention specialist.

The installation of the fireplace should be performed in the following order:

- connection of the fireplace to the chimney and assembly of the air intake;
- putting the fireplace into use and observing its functioning for the purpose of detecting defects and anomalies (for about 2 weeks);
- assembly of the encasing.

6.1. Transport

Transport and handling:

- the insert is delivered as an assembled unit, fastened to a palette and wrapped in stretch foil;
- the fireplace should be transported in a vertical position;
- after unpacking, check the insert for any transport related damage;
- unpack the insert in the vicinity of the installation site; exercise caution when moving the insert (preferably on a cart) (paying special attention to the door and glass);
- the packaging materials of the fireplace insert are not toxic or harmful and should be recycled or stored by the User;
- to facilitate the assembly of the fireplace in hard-to-reach places, the ceramic lining (shielding the hearth) can be removed; after the assembly, every element made of ceramic concrete should be correctly placed in its intended location.

6.2. Chimney duct

The fireplace insert must be appropriately selected to match the cross section of the combustion duct (flue pipe) and the height of the flue.
The cross-sectional area of the flue and of the combustion duct is calculated in accordance with the following formula:

$$F = 0{,}003x\,{}^{Q}\!/_{\sqrt{h}} \qquad [m^2]$$

where:
F – cross-sectional area of the flue and of the combustion duct [m^2]; Q – rated thermal input [kW];
h – the height of the chimney [m].

NOTE:
To ensure the correct functioning of the insert, there must be a correct chimney draught in the connector of the flue pipe:

- the insert will not function properly if the chimney draught is not sufficient, resulting in excessive soot deposits on the glass and in combustion ducts and reducing the total thermal power of the insert (due to which combustion gases may escape to the room);
- if the draught is too strong, the burning process may be too intense, causing high consumption of fuel and resulting in permanent damage of the insert.

The chimney should be regularly inspected by a chimney sweep company.

6.2.1. Connection of the chimney ducts:

- before installing the fireplace insert, the chimney ducts and its technical parameters and condition must be inspected and approved by a chimney expert;
- the fireplace insert may be only installed after the flue pipe has been inspected and approved by a chimney expert.
- the fireplace inserts are equipped with a rotary flue which allows for the flue to be connected in different directions avoiding the use of bends.

The chimney duct must satisfy the applicable standards.

The fireplace insert must be mounted and connected to the chimney in accordance with the supplied *Operation and Installation Manual* (together with deflector plates - if they are to be used, and the insulation of the flue pipe).

The manufacturer does not recommend the assembly and installation of the appliance by the user on his or her own. To make sure that the insert is installed and put to use in a correct and safe manner and to satisfy the guarantee conditions, the user should have the appliance installed and put to use by a qualified installer or an installation company. The installer is required to confirm in the guarantee card (signature and stamp) that the fireplace has been installed in accordance with good building practices and the applicable legal provisions. If the above-mentioned activities are not performed, it will invalidate the guarantee.

6.2.2. The combustion outlet system should have the following features:

- the path of the combustion duct should be as short and straight as possible (bends increase flow resistance and facilitate the accumulation of condensed moisture);
- it is forbidden to connect the insert to the same chimney duct with another heating device;
- the combustion duct must be made from non-combustible materials and it must be thermally insulated

Enough room should be left when building the enclosure of the fireplace insert so as to ensure an easy access for the purpose of cleaning the insert, the flue pipe and the chimney.

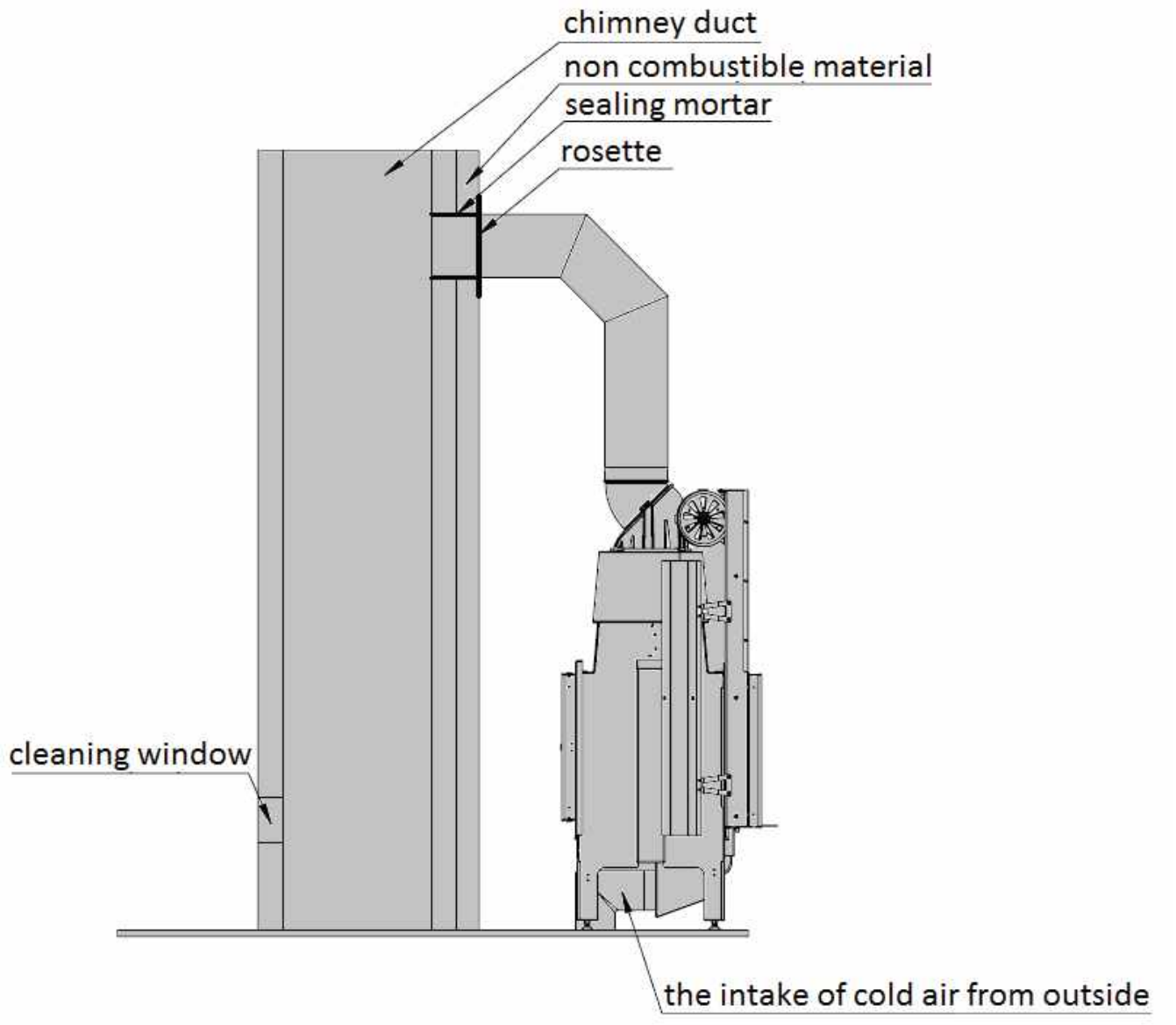


Figure 20. Diagram of connecting the insert to the chimney.

6.3. Ventilation of the insert:

- fresh air can be supplied to the combustion chamber from outside (if the amount of air is too small, it will hinder the burning process and toxic combustion gases may be produced, including carbon monoxide);
- the fireplace must be encased in such a way so as to ensure a supply of fresh air from the outside

- in the case of using a system of distributing air to other rooms, it is essential to ensure the return of cooled air to the room where the fireplace insert is installed so that the air can circulate freely (otherwise, the work cycle of the fireplace insert may become disrupted, which will hinder the distribution of warm air);
- when choosing the site for the appliance and during its installation, attention should be paid to ensuring the correct circulation of air and a proper balance between air inflow and outflow 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 inlet and a warm air outlet (ventilation should be provided for the convection space to make sure that air comes into contact with the heatable parts of the insert and enters the flue pipe).

6.4. Installation of the insert

The appliance must be installed in accordance with the applicable provisions of the AS/NZS2918 AS/NZS2018.
The fireplace must be installed and assembled by qualified specialists.

6.4.1. To ensure the correct installation:

- the insert must be placed at a safe distance from any flammable materials (the walls or other surfaces surrounding the fireplace may have to be secured);
- the fireplace is equipped with regulated feet for adjusting the height (levelling) of it (with an adjustment range of up to 4 cm);
- if the fireplace has to be raised above the adjustment range of the feet, make a brick base and place the fireplace on it (do not remove the feet as they are needed for levelling purposes);
- incorrect levelling of the fireplace will hinder the functioning of the door (it will not close properly);
- **an inlet vent (inspection window) at the front or side is recommended, in the lower part of the encasing of dimensions 20cmx30cm - allowing easy access to the throttle mechanism at the front and bottom of the insert;**
- **If there are no inspection windows, the manufacturer is not liable for damage to the cartridge during the service and warranty works.**

6.4.2. General recommendations concerning the housing:

- the fireplace insert can be placed anywhere, as long as it is positioned at an appropriate distance from the insulation and the housing;

- the supporting structure and the housing of the fireplace insert must be made from non-flammable heat-resistant materials ; $2\left[\frac{m^2K}{W}\right]$
- the housing should be made from non-flammable materials;
- distance between the insulation materials and the insert please refer to technical specifications.
- during regular use, the housing of the fireplace extends (due to the heat), therefore there should be tiny gaps between stone, marble or ceramic elements;
- preferable insulation material should be resistant to temperatures over 500^{o}C; please refer to technical specifications.
- preferably, no insulation should be provided for the flue (it will ensure more effective dissipation of heat into the room);
- it is recommended to create an isolated decompression chamber with separate ventilation vents. Thanks to this, the ceiling is better protected against discoloration and cracking;
- the housing cannot lean on the fireplace;
- the thickness of the insulation depends on the thermal conductivity coefficient λ (the ability of a material to conduct heat) and heat resistance of a given material; please refer to technical specifications.

7. START-UP

Before lighting your appliance for first time make sure you have read this manual fully and acquainted yourself with the controls of this appliance. Ensure that you have allowed sufficient time for the heat resistant sealant to cure. The heat-resistant paint on your stove will cure and harden the first time you light your appliance. The curing process produces a good deal of smoke and odor, it is therefore important that the first time you light your appliance the room should be well ventilated. During the process it is important to open and close the stove door periodically (every 30mins) during the first couple of firings therefore preventing the door seal cord around the door from sticking and coming away from the door. Once the heat-resistant paint has hardened the smell will disappear.

7.1. Getting ready for the start-up

Before lighting the fireplace for the first time, it is necessary:

- to remove any labels, paper stickers and accessories from the body of the insert or hearth to eliminate the risk of fire; the same applies to transport safety devices;
- to check if the deflector/s, ceramic fittings are mounted correctly and were not dislodged from their correct position during installation (any discovered mounting errors must be corrected). Non-removal of such errors may hinder proper functioning of the fireplace insert. In the case of inserts with multi-pane glass doors, it should be checked if particular glass panes did not become loose during transport or use;
- to check the operation of:
  - mechanism regulating the air inflow into the combustion chamber (cold air inflow throttle);
  - front door closing mechanism (hinges, handle);
- to check the correctness of the installation in accordance with this *Operation and Installation Manual* and the applicable legal provisions, especially in terms of the following safety-related issues:
  - is the fireplace levelled
  - is a proper ventilation system provided for the room and the fireplace
  - does the air intake ensure unobstructed flow of air from outside and into the room
  - is the connection to the chimney sealed properly
  - has the fireplace encasing been built correctly

7.2 Lighting the fireplace

Before lighting the fireplace, please do the following:

- arrange a stack of firewood in the hearth, starting with larger pieces of wood, followed by medium-sized pieces of wood and then by small chips of wood for fire lighting – light it with a match;
- set the primary air regulator in the fully open position (POSITION 2);
- after lighting the fire, the door of the fireplace must be closed;
- when the fuel is burning properly, adjust the burning process with air regulators to ensure a steady and calm rate of burning (setting the mechanism between 3 and 4 position will direct a small part of primary air under the grate of the fireplace, whereas the remaining part of the air will be directed to the combustion gases after burning system; opening of the air intake mechanism in POSITION 3 - fuel will burn with high intensity);
- it is recommended, at the final stage of burning, to open the door and move the remaining embers onto the grate, using a poker, so that all fuel is used up;
- test the functioning of other components of the installation (when the fire is lit for the first time).

ATTENTION:

Because a large amount of air is fed under the grate and to the air curtain and after-combustion system, too much fuel in the combustion chamber causes the production of a large amount of wood, which results in a temporary smoke of the glass.

The maximum shift of the throttle to the right causes a complete shut-off of the air supply to the combustion chamber, which results in a gradual extinguishing of the furnace.

If necessary, the grate is unblocked with a poker or a grate lever (if the insert has a movable grate).

During the first hours of using the insert, it is recommended to load the fireplace with a small amount of fuel, i.e. up to 50% of the normal load.
When the fireplace is lit for the first time, water may condense on the internal walls of the combustion chamber. This phenomenon is normal and is caused by the condensation of water vapour contained in combustion gases. It should disappear after the combustion chamber has heated up.
If combustion gases escape from the fireplace chamber, the position of the combustion gas throttle should be adjusted and the chimney draught should be increased.

Before the next lighting, clean the hearth from remaining ash.

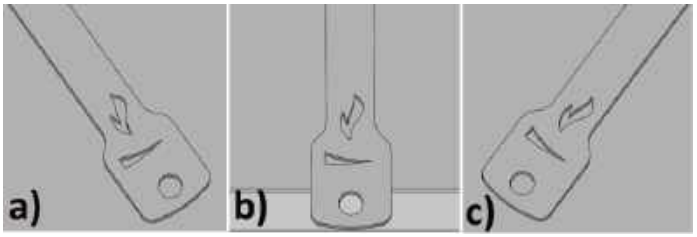


Figure 21. Primary air settings; a) primary air closed; b) 50% open primary air; c) primary air opened in 100%

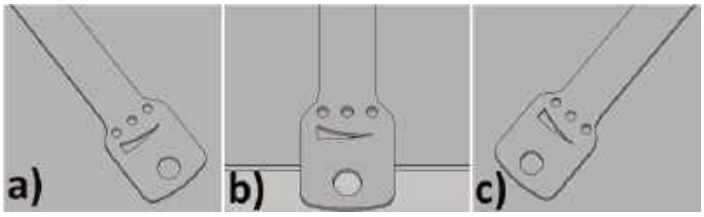


Figure 22. Secondary air settings; a) secondary air closed; b) 50% open secondary air; c) secondary air open in 100%

8. USE

The surface of the insert is covered with a special heat-resistance paint. After lighting the fireplace, this paint initially becomes soft (care must be taken not to scratch it then) and then hardens. **Due to this process, an unpleasant smell is produced when the fireplace is lit for the first few times. It is recommended to make sure that the room is well aired during that time.**

If pets or birds are kept in the room, they should be temporarily moved to another place.
In the initial stage of using the fireplace (for about 2 weeks), the manufacturer recommends maintaining a small flame by burning a smaller quantity of fuel at a lower temperature. **This method of lighting the fireplace is intended to prevent cracks in the ceramic lining, to avoid deformation of the fireplace structure or damage to the protective (paint) layer of the insert.**

8.1. Types of fuel

Considering the design of our appliances, the most suitable type of fuel is the deciduous hardwood.

The best fuel is wood which has been seasoned (for at least two year in a well-ventilated and dry place), cut and chopped into logs. We advise against using the wood of coniferous trees. Freshly cut or damp wood is not a good fuel because it has low calorific value. **The burning of insufficiently dried wood may result in increased deposits of creosote in the combustion ducts, which may cause the glass panel to break.**

NOTE:

It is forbidden to burn waste fuel, liquid fuels and other types of fuel not recommended by the manufacturer of the fireplace insert.

It is strictly forbidden to use the following as fuel for the fireplace: **bituminous coal, the wood of tropical trees, all types of products containing chemical compounds such as petrol, alcohol, naphthalene, oil, waste and laminated panels containing adhesives.**

8.2. Refuelling:

- fuel should be added when flames disappear over the layer of embers in the hearth; it is best to heap embers into a pyramid-like shape onto the grate (from both sides, to ensure a sufficient flow of air from underneath the grate for flames to appear) and then add slivers of wood;
- embers should not be heaped over the grate in an even layer because it would significantly reduce the flow of air from under the grate and result in a build-up in the hearth chamber and in the whole insert, which might lead to an explosion;
- wooden logs in the combustion chamber should be arranged in parallel to the plane of the door;
- before loading a fresh portion of fuel into the furnace, the grate should be cleaned when it is necessary to empty the ash pan.

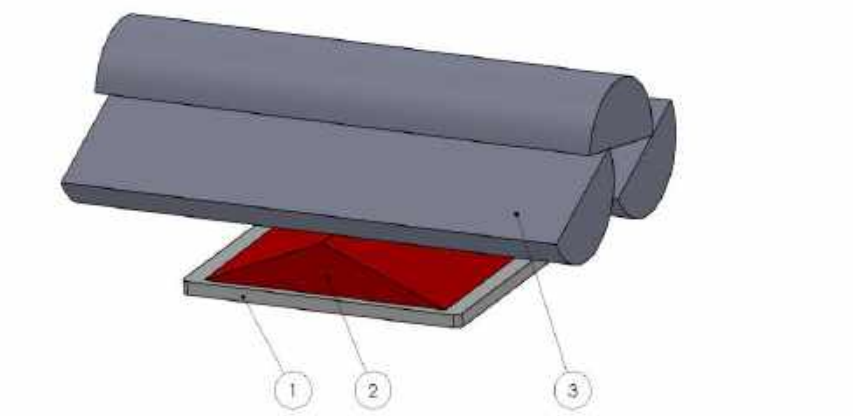


Figure 23. The method of laying embers and adding wood; 1 - grate, 2 - heat, 3 - wood logs.

8.2.1 Preventing the escape of combustion gases

To prevent the escape of combustion gases from the insert to the room during the opening of the door, it is recommended to:

- about 10 seconds before opening the door, the primary air regulator must be fully opened (thro le lever maximally to the left);
- open the damper valve of the combustion gas throttle in the flue (if such a valve is installed in a given insert);
- move the door slightly partly open, wait a few seconds (until combustion gases disperse) and then slowly open the door of the insert;
- exercise caution when opening the door and after opening it because burning pieces of wood may fall from the hearth;
- after adding an appropriate quantity of fuel, close the door of the hearth;
- when the fuel is well alight, set the air regulator in its original position;
- the optimum amount of fuel is specified in table no. 1;

NOTE:

Take care not to overload the insert with fuel. Overloading may cause permanent damage to its structure.

8.3. Keeping the glass pane clean

The cleanliness of the glass pane depends on using appropriate fuel, as well as on:

- supplying a sufficient quantity of air for the burning process;
- optimum chimney draught;
- the method of operating the fireplace insert;
- the use of fuel with a moisture content of between 12%-20%

To keep the glass pane clean, it is advised to add the recommended quantity of fuel and to position it centrally on the grate and as far from the glass panel as possible.
In the case of a build-up of tar on the glass pane, we recommend increasing the intensity of the burning process by opening the primary air regulator. The tar will burn off when the appliance is operating at full capacity.

8.4. Operation in adverse weather conditions and in the first period of use

In the first period of use or in adverse weather conditions (e.g. during a fog, on damp and rainy days, in weather with strong gusty winds or when outdoor temperature exceeds +15°C), the chimney draughtmay become too weak to remove all combustion gases. To offset this negative effect, the fireplace should be loaded with the smallest possible amount of fuel or additional draught regulators should be used.

8.5. Ash removal

Depending on the amount and type of fuel to be burned:

- use a poker to grab the ashes from the grate into the ash pan;
- after scraping ash, raise the clamp with the grate, then remove the ash pan and empty it;
- the ash pan can be emptied only when it's cold, we recommend that this operation be carried out at the latest before each lighting;
- before emptying the ash pan, check that it contains no burning fuel residue that could cause a fire in the waste container.

CAUTION:

The manufacturer recommends that the ashtray should not be overfilled. Overfilling the ashtray leads to a limitation of the air supply under the grate, which results in a deterioration of combustion parameters, and in extreme cases may prevent the fireplace from firing up.

If ash remains in the ash pan too long, it may result in premature corrosion. Ash from burnt wood can be used for compost or as a fertiliser.

8.6. General comments

Things to be done:

- make sure that the door of the hearth (combustion chamber) and the door of the ash pan (if installed in a given insert) are closed (unless they need to be opened for maintenance purposes);
- prior to lighting up after a prolonged shutdown period, check the flue pipe in the chimney and the hearth to make sure that they are unobstructed and clean;
- during the performance of any maintenance or operation-related tasks, remember that the components of the insert can be very hot. Therefore, it is necessary to wear protective gloves;
- for any repairs of the insert use only spare parts produced by its manufacturer;
- all repairs must be performed by a qualified installer;
- during the operation and use of the fireplace insert, follow the basic safety rules.

It is forbidden:

- to leave any flammable materials or items sensitive to high temperature near the glass of the insert;
- to use the appliance when its glass is broken;
- to extinguish the hearth fire with water;
- to let children come near the appliance;
- to make any structural changes or to alter the rules of installation and use without prior written consent of the manufacturer;
- if any malfunctions are detected, the fire must be extinguished immediately.

NOTE:
In emergency situations, extinguish the fire by covering the fuel with sand or cold ash. DO NOT USE WATER!

If the fireplace does not function correctly, any maintenance work may only be carried out after ensuring good ventilation of the rooms, as well as the assistance of another person equipped with a dry-powder extinguisher.

NOTE:
When the burning process is slow, large quantities of organic products of combustion are produced, which may lead to the build-up and ignition of creosote in the chimney duct. As a result, the so-called chimney fire breaks out, which may spread to the whole building.

In the case of a chimney fire, please do as follows:

- cut off the inflow of air to the fireplace by closing the throttle of the cold air inlet;
- close the rotary damper valve of the combustion gas flue (if installed in a given model);
- close the door of the fireplace tightly;
- dial 000 to alert the local Fire Department.

9. MAINTENANCE

To ensure safe and problem-free operation of the appliance, observe the following guidelines:

- perform periodic maintenance tasks in a timely manner – have the fireplace inspected by a specialized servicing company at least once a year;
- keep the following components clean: glass pane, combustion chamber with the ash pan and the chimney duct;
- systematically empty the ash pan - left ash can lead to corrosion of the ash pan;
- make sure that the combustion chamber is cleaned and serviced with a frequency which is appropriate for a given type of fuel;
- make sure that steel or cast-iron elements inside the insert are cleaned with appropriate tools such as: brush, scraper and poker; use protective gloves;
- any maintenance activities may be only performed after the fire has been extinguished and the fireplace has cooled down;
- clean the ceramic glass panel of the insert with a kitchen paper (paper towel). It should be moistened with water and then collected with a bit of clean ash from the inside of the grate, avoiding direct contact with steel elements and cast-iron devices. By rubbing the glass with so prepared moistened paper, we can effectively dissolve the tarnish - so that it can be wiped with a dry paper towel. All agents used to clean the glass must not contain abrasive materials causing its damage (scratching);
- clean the interior of the fireplace, check the supply and exhaust gas outlet;

9.1. Periodic cleaning of the fireplace

To ensure an efficient burning process in the hearth of the fireplace insert, the combustion chamber, the grate, the flue and combustion gas ducts must be cleaned periodically.

Component	Frequency	Tools and resources
The convection surfaces of the fireplace insert and the pipes connecting it with the chimney duct – cleaning	As needed, but not less frequently than once a year or after a prolonged shutdown period	A brush made from a resilient material, vacuum cleaner, fireplace cleaning products.
Combustion gas duct, chimney- checking if the chimney is not obstructed and that the combustion gas installation is in a good condition	At least twice a year, after the heating season and after a prolonged shutdown period	Specialist chimney sweep company
Front glass pane	As needed	Cooled - moistened paper towel with a bit of clean ash, no abrasive materials causing its damage
Grate and internal components ofthe insert	As needed	Vacuum cleaner, fireplacecleaning products
Maintenance of the combustion gas throttle - replacement of the gaskets of the glass pane and of the hearth door	At least once a year, after the heating season or as needed, depending on the degree of wear and tear	Servicing company authorizedby the manufacturer

10. TROUBLESHOOTING

During everyday use of the fireplace insert, the below described anomalies may become apparent in the case when the fireplace insert has been installed in a manner contrary to this *Operation and Installation Manual*.

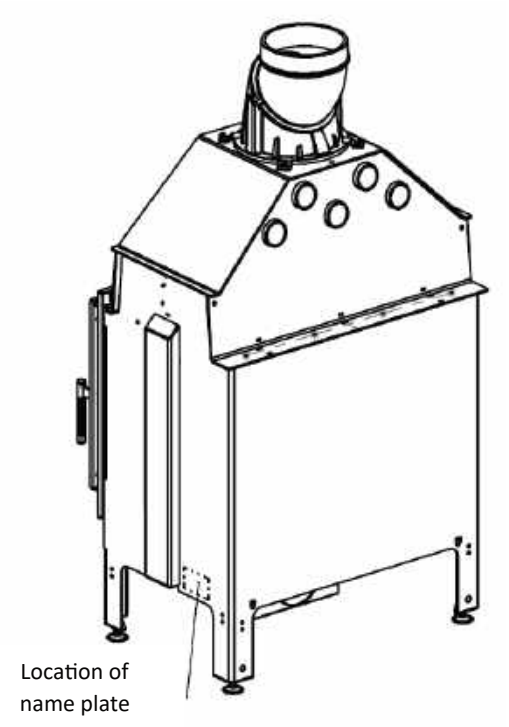
10.1 The most frequent malfunctions and ways of eliminating them:

	Problem	Solution
Smoke escapes to the room when the door is opened	the door may be opened too abruptly, causing negative pressure in the combustion chamber	open the door slowly
	the adjustable damper valve of the flue of the chimney duct is closed (if such a valve has been installed)	open the damper valve
	insufficient amount of air in the room where the fireplace insert is installed	check the efficiency of the ventilation and make sure that the room is well aired
	weather conditions	
	inadequate chimney draught	check the efficiency of the chimney installation

The heating efficiency is low or the fire in the hearth goes out	insufficient quantity of fuel in the hearth	add as much fuel as is required
	the moisture content of the fuel is too high	use fuel with a moisture content of up to 20%
	inadequate chimney draught	check the efficiency of the chimney installation
The heating efficiency is low despite the correct burning process in the hearth	inappropriate wood with a low calorific value is used	use wood with a higher calorific value instead
	the moisture content of the fuel is too high	use fuel with a moisture content of up to 20%
	the fireplace has been fuelled with thin and small pieces of wood which burn very quickly	place thicker logs in the fireplace
Soot accumulates on the glass and it does not burn off	the fuel burns too slowly and the temperature in the combustion chamber is too low	increase the amount of air in the combustion chamber, use fuel with a moisture content of up to 20%
	the fireplace has been fuelled with wood of coniferous trees with a high resin content	use dry deciduous hardwood instead
The appliance may be functioning incorrectly due to external factors	tall objects are situated too near the chimney	increase the height of the chimney or use a rotary chimney cowl cap or another type of chimney cowl cap
	adverse weather conditions, e.g. wind or windless weather, low atmospheric pressure, high air humidity, fog, etc.	use a chimney cowl cap and, if it does not help, seek advice of a chimney expert to establish the cause of the problem

11. NAMEPLATE

The nameplate is placed on the back wall of the appliance.



Location of name plate

12. INSPECTION RECORDS

REGISTER OF INSPECTIONS OF THE CHIMNEY	
Inspection	Date, signature and stamp
Inspection	Date, signature and stamp
Inspection	Date, signature and stamp
Inspection	Date, signature and stamp
Inspection	Date, signature and stamp
Inspection	Date, signature and stamp

REGISTER OF INSPECTIONS OF THE FLUE PIPE	
Inspection	Date, signature and stamp
Inspection	Date, signature and stamp
Inspection	Date, signature and stamp
Inspection	Date, signature and stamp
Inspection	Date, signature and stamp
Inspection	Date, signature and stamp

HESTIA

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