



## User Manual

Instructions for installation, operation, and maintenance  
(installation, adjustment, and usage)

# HOT HEX

Wood-burning stove



EN 13240 prEN 16510-1

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**PLEASE READ AND FOLLOW THE USER OPERATING INSTRUCTIONS**



### WARNING

- IT IS MANDATORY TO USE FIREWOOD WITH A MOISTURE PERCENTAGE LOWER THAN 20%, OR FIREWOOD THAT HAS BEEN STORED IN A DRY AND OPEN SPACE FOR TWO YEARS.
- THE MINIMUM INSTALLED HEATING SYSTEM POWER MUST NOT BE LESS THAN 65% OF THE STOVE'S NOMINAL POWER, AND THE MAXIMUM INSTALLED HEATING SYSTEM POWER MUST NOT EXCEED 100% OF THE STOVE'S NOMINAL POWER.
- THE CHIMNEY CONNECTED TO THE STOVE MUST COMPLY WITH THE REQUIREMENTS SPECIFIED IN THE USER MANUAL.
- DO NOT USE FLEXIBLE HOSES INSTEAD OF FLUE PIPES FOR CONNECTING THE DEVICE TO THE CHIMNEY.
- REGULAR MAINTENANCE AND CARE, SUCH AS CLEANING THE STOVE, FLUE PIPES, AND NOZZLES, ARE IMPORTANT FOR SAFE OPERATION, EFFICIENCY, AND PRESERVATION OF THE STOVE'S VALUE.
- UNAUTHORIZED MODIFICATION OF THE DEVICE IS PROHIBITED, AS ANY UNAUTHORIZED MODIFICATION WILL VOID THE WARRANTY.
- USE OF THE STOVE IS SUBJECT TO COMPLIANCE WITH ALL THE SAFETY STANDARDS ESTABLISHED BY THE RELEVANT LAWS IN FORCE IN THE PLACE OF INSTALLATION BESIDES THE PRESCRIPTIONS CONTAINED IN THIS MANUAL.
- THE APPLIANCE IS NOT INTENDED FOR USE BY PEOPLE ( INCLUDING CHILDREN ) WITH LIMITED PHYSICAL, SENSORIAL OR MENTAL ABILITIES, OR WITHOUT SUFFICIENT EXPERIENCE OR KNOWLEDGE UNLESS THEY ARE SUPERVISED OR INSTRUCTED ON THE USE OF APPLIANCE BY A PERSON RESPONSIBLE FOR THEIR SAFETY.

## 1. Introduction

Congratulations on purchasing this elegant wood-burning stove! This user manual will familiarize you with the stove's features and operation. Please keep the manual safe to refer to for proper handling at the beginning of the heating season. The buyer and user of the wood-burning stove are obligated to familiarize themselves with the proper handling through this manual!

**The wood-burning stove must be installed and used in accordance with applicable national and regional regulations.**

## 2. Purpose

**The HOT HEX wood-burning stove is intended for heating and for intermittent combustion.**

**Do not use any type of coal for burning in the stove!**

## 3. Installation of the Wood-Burning Stove and Flue Pipe Connection

### 3.1. Load-Bearing Capacity

Before installation, check if the load-bearing capacity of the substructure can support the weight of your heating appliance. If the capacity is insufficient, appropriate measures (e.g., load-distribution plate) should be taken to achieve the required capacity.

### 3.2. Flue Pipe Connection/Combustion Air Supply Connection

**Air Supply Connection** For connecting to the chimney, a flue pipe made of 2mm thick sheet steel should be used. All connections between the stove and the chimney must be secure and airtight. Ensure that the flue pipe does not enter the free cross-section of the chimney. The use of double-wall construction is recommended. The flue pipe should be installed with a slight slope towards the chimney or at least horizontally. Use a maximum of two 90-degree bends.

The appliance is equipped with an external combustion air supply connection (internal air support system). A Ø100 mm diameter combustion air supply pipe can be mounted on the rear connection (additional equipment). The length of the pipe should not exceed 5 m, and it can have a maximum of two 90-degree bends. In very low external temperatures, condensation may occur on the combustion air supply pipe and the stove (corrosion hazard!). Therefore, it should be equipped with appropriate insulation. Adhere to professional trade rules for stoves and ventilation.

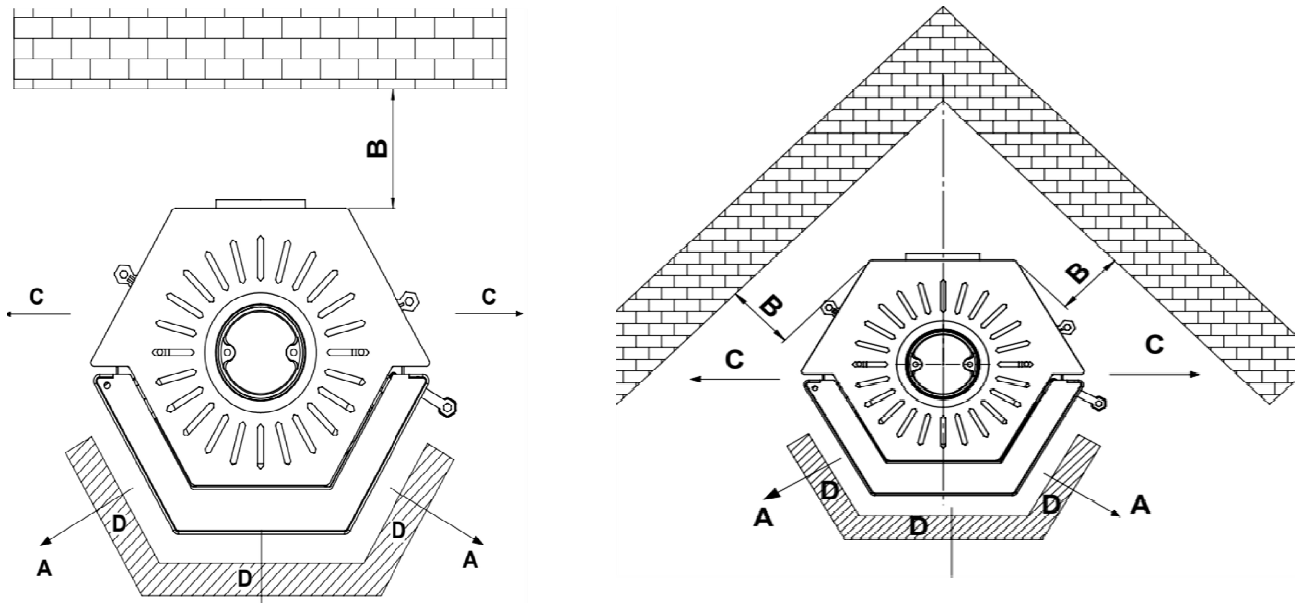
#### 4. Technical specifications

No	Parameter	Unit	Explanation	Min. parameter for data plate
1.	$P_{nom}$	kW	the nominal heat output or a range of outputs (dependent on fuel types), rounded to the nearest one decimal place	7,8
2.	$P_{SHnom}$	kW	the nominal space heat output or a range of outputs (dependent on fuel types), rounded to the nearest one decimal place	7,8
3.	$\eta_{nom}$	%	the appliance efficiency at nominal heat output, rounded to the nearest integer	79,6
4.	$\eta_s$	%	the appliance seasonal space heating efficiency at nominal heat output, rounded to the nearest integer	69,6
5..	$EEl$		the energy efficiency index, rounded to the nearest integer	105
6.	$CO_{nom}$ (13 % O <sub>2</sub> )	mg/ m <sup>3</sup>	CO emission at 13 % oxygen content at nominal heat output, rounded to the nearest integer	976
7.	$NO_{xnom}$ (13 % O <sub>2</sub> )	mg/ m <sup>3</sup>	NOx emission at 13 % oxygen content at nominal heat output, rounded to the nearest integer	108
8.	$OGC_{nom}$ (13 % O <sub>2</sub> )	mg/ m <sup>3</sup>	hydrocarbon emission at 13 % oxygen content at nominal heat output, rounded to the nearest integer	87
9.	$PM_{nom}$ (13 % O <sub>2</sub> )	mg/ m <sup>3</sup>	particulate matter emission at 13 % oxygen content at nominal heat output, rounded to the nearest integer	36
10.	$p_{nom}$	Pa	minimum flue draught at nominal heat output, rounded to the nearest integer	12
11.	$d_R$	cm	the minimum distances from the rear to combustible material, rounded to the nearest integer <sup>a</sup>	30
12.	$d_S$	cm	the minimum distances from the top to combustible material in the ceiling, rounded to the nearest integer <sup>a</sup>	>75
13.	$d_P$	cm	the minimum distances from the front to combustible material, rounded to the nearest integer <sup>a</sup>	
14.	$d_F$	cm	the minimum distances from the front to combustible material in bottom front radiation area, rounded to the nearest integer	70
15.	$T_{snom}$	°C	the flue gas outlet temperature at nominal heat output, rounded to the nearest integer	286
16.	$\phi_{f,g nom}$	g/s	the flue gas mass flow at nominal heat output, rounded to the nearest one decimal place	7,7
17.	CON or INT	-	whether the appliance is capable of continuous operation (CON), whether the appliance is capable of intermittent operation (INT)	INT
18.	$d_{out}$	mm	the diameter of the flue gas outlet, rounded to the nearest integer	150
19.	$L, H, W$	mm	the overall dimensions of the appliance (length, height, width), rounded to the nearest integer <sup>a</sup>	502, 1505, 606
20.	$m$	kg	Mass of the appliance, rounded to the nearest integer	190

Heating capacity of the room according to DIN18893

#### 4. 1. Fire Safety Rules

When installing, fire safety rules (FeuVo) must be observed. Pay attention to the necessary minimum distances from the mounting wall, flammable objects, and floor protection.



Minimum distance to flammable materials:

A	70 cm	In front
B	30 cm	At the back
C	45 cm	On the right/left
D		
	75 cm	above

#### 5. General Guidelines for Working with a Fireplace

Never use spirit, gasoline, or other flammable liquids for ignition. Use only the recommended fuel (see 5.2). Ensure an adequate supply of fresh air in the room where the fireplace is located (combustion air supply). The outer surfaces of the fireplace become very hot during operation! There is a risk of burns on the entire fireplace. Therefore, ensure that children never stay alone near the fireplace. Do not leave the fireplace unattended for an extended period. The fire must always be lit with the fireplace doors closed.

### 5.1. Starting (Fireplace Lighting)

Only an adult should use the fireplace and strictly follow these instructions. The fireplace should be regularly inspected by an expert. Set the secondary air regulator (left) to the medium position. Pay attention to whether the butterfly damper in the flue pipe is fully open. The primary and secondary air regulators are open. First, place crumpled paper or ignition cubes in the back of the fireplace, and then arrange kindling or small pieces of wood on top. Ignite it and temporarily lean the fireplace doors. The open fireplace doors support the flow of smoke from the fireplace while preventing the deposition of flue gases (formation of soot) on the glass doors. Once the fire has properly ignited, arrange logs in a single layer and fully close the fireplace doors. Close the primary air (for ignition) completely. Also, pay attention to the maximum fuel quantities specified in Do not immediately burn with the maximum amount of fuel. All materials must gradually acclimate to the thermal load. This prevents cracking of the fireplace lining, damage to the coating, and material deformation. Any odor that may occur due to the drying of the protective coating will disappear after a short time.

**Therefore, thoroughly ventilate your room during the first ignition.**

Adding fuel should be done during the burning phase when the flames from the previous combustion are extinguished. When you open the fireplace doors, air enters the stove, resulting in an increased amount of flue gases in the chimney. When adding fuel, avoid the exhaust gases and ash swirling by opening the fireplace doors very slowly.

### 5.2. Suitable Fuel

The fireplace is intended only for burning natural wood in the form of logs. The classic fireplace wood is beech and birch. These types of wood have the highest energy value and burn cleanly if properly stored and dry. Freshly cut wood should be split and left outdoors, protected from rain, for 12-18 months. According to emissions protection regulations, wood may contain a maximum of 20% moisture. It should not be burned, for example:

- Wet or chemically treated wood
- Small-cut wood
- Paper and cardboard (except for ignition)
- Bark or chipboard waste
- Plastic or other waste

### 5.3. Fuel Quantity, Air Adjustment, and Time

Fuel	Fuel Quantity	Burning Time	Primary air	Sekundary air
Log Wood	2 log woods 1,5 kg	40 min	10 % Open	50 % open

#### Note:

That never more wood should be placed than necessary for the nominal heating capacity. The above-mentioned fuel quantity must not be exceeded, as it can cause overheating of the stove. Only naturally dried wood or briquettes may be used in accordance with emissions protection regulations. The wood used must be dry (moisture content, 20%). This is usually the case if the wood is stored for two years in a dry, well-ventilated place. Wet wood has low calorific value and leads to soot deposits in the flue channels and chimney. Wood with treated upper surface (varnished, painted, veneered, impregnated, plywood, packaging waste), plastic, newspapers, rubber, leather, textiles, etc., should not be burned.

Burning such materials pollutes the environment and is prohibited by law. In addition, damage to the chimney may occur. In this case, any kind of warranty from the manufacturer is voided. Under unfavorable draught conditions in the chimney, disturbances may occur, such as incomplete smoke evacuation. In such cases, starting a fire as a decoy in the chimney may be necessary. If, despite this measure, proper draught in the chimney is not established, for safety reasons, the stove should not be operated.

**Note:** Better fuel utilization and, therefore, better room heating can be achieved by partially or fully opening the oven door. You have two manual regulators for controlling the combustion regulation. The right one is for primary air, and the left one is for adjusting the secondary air. Adjust the primary air regulator... Using the secondary air regulator, you control the combustion. When a certain temperature is reached...

### 5.4. Position of Air Regulators



Secondary Air Regulator

the LEFT side



Primary Air Regulator on the RIGHT side

### 5.5. Ash Tray Emptying

Ash Tray Emptying Pay attention to regularly empty the ash tray to prevent the ash heap from getting too close to the grate. Otherwise, there is a risk that the grate may not cool down sufficiently and get damaged. Caution! Always check for any remaining embers in the ash before emptying it. Even if the ash appears cold on the outside, there may still be residual embers inside that can cause a fire in the trash.

### 5.6. Cleaning and Maintenance

**The wood stove should only be cleaned when it is cold! Once a year, or more frequently as needed, remove ash deposits from the flue pipe, firebox, and flue gas redirectors. A vacuum cleaner for dust and ash can be used for this purpose. Clean the firebox only when the ash tray is closed. For cleaning the glass surface, it is best to use an appropriate glass cleaning agent. Do not clean the painted surfaces of the external parts of the stove with aggressive substances. Cleaning the surfaces with a dry cloth is recommended. Avoid moisture! Moisture can lead to rust formation.**

### 5.7 Chimney Fire

The risk of a chimney fire increases when wet wood or inappropriate fuel is used, or when there is smoldering due to improper combustion adjustments. Improper combustion leads to the accumulation of soot particles (shiny soot or oily soot) in the chimney.

In the event of a chimney fire, close the air intake on the stove and call the fire department. The chimney fire should not be extinguished with water, as it immediately creates steam (water vaporizes at a ratio of 1:1700), which can seriously damage the chimney due to a sudden increase in pressure or even cause an explosion. Regularly have the wood stove checked by a professional.

### Warranty Terms

Warranty Terms To fulfill warranty claims, it is always necessary to present the purchase receipt. For our EM-DIP devices, we provide a warranty to the customer under the following conditions, independent of the obligations of the seller from the purchase agreement: Warranty claims can only be submitted if the device has been inspected and commissioned by an authorized EM-DIP dealer (see separate warranty certificate)! The warranty covers free repair of the device or the claimed parts. The right to free replacement only applies to parts that have defects in material or workmanship. All material costs required to rectify this defect will be covered. Further claims are excluded.



1. The warranty period lasts for 24 months (according to our warranty terms) and begins from the moment of delivery, which is proven by the invoice or delivery note. During the warranty period, all functional faults that can be proven as manufacturing or material defects, despite proper connection and appropriate handling by an authorized dealer, are covered. Minor damages are covered by this factory warranty only if reported to the service within 2 days of the device delivery. Damages during transport (which must be reported to the transport company according to transport conditions) are not covered by this warranty. The warranty period is not extended for the device or newly installed parts by using warranty services.
2. The location, type, and extent of repair or device replacement are decided by our service based on reasonable assessments. Unless otherwise agreed, our service center should be informed. Repairs are usually carried out on-site, and exceptionally in a service workshop. The devices that need to be repaired should be placed in a way that does not damage furniture, flooring, etc.
3. The required spare parts and labor for repairs will not be charged.

We are not responsible for:

- Damages and defects to the devices and their parts that occur due to external, chemical, or physical influences during transport, storage, installation, and use (e.g., water extinguishing damages, food spillage, condensation, overheating)
- Rust (metal rust only in the presence of moisture)
- Cracks in natural stone, enameled, or ceramic parts are not considered quality defects.
- Incorrect size selection.
- Failure to comply with our installation and usage instructions or applicable construction, general, and local regulations of competent authorities. This includes defects in flue pipes (flue pipe, insufficient or excessive smoke flow) as well as improperly performed maintenance work, especially on devices, their fittings, and pipes.
- Use of inappropriate fuel.
- Mishandling and overloading that can lead to device overheating.
- Negligent treatment.
- Insufficient maintenance, inadequate cleaning of devices or their parts.
- Use of inappropriate cleaning agents (refer to the user manual).
- Wear of iron or refractory parts exposed to flames (e.g., steel, cast-iron refractory linings, or vermiculite linings), as well as all glass parts!

#### BURNING DURING TRANSITIONAL PERIODS




At external temperatures above 15°C, due to low draft pressure in the chimney, a small fire may occur. This creates more soot in the stove's flue channels and chimney. Increase the primary air supply and perform more frequent kindling of the fire, adding smaller pieces of firewood to reduce soot during the transitional period.

## DETERMINING THE REQUIRED HEAT OUTPUT

There is no absolute rule that allows for the calculation of the required heat output. This power is determined by the space you want to heat but also depends heavily on insulation. On average, the required heat output for a properly insulated room would be 30 kcal/h per m<sup>3</sup> (at an external temperature of 0 °C).

Fuel	Unit	Indicative combustion values		Required quantity relative to 1kg of dry wood
		kcal/h	kW	
Dry wood (15% moisture)	kg	3600	4,2	1,00
Moist wood (50% moisture)	kg	1850	2,2	1,95

Possible malfunction	Possible cause
Wood does not ignite or only smolders	Wood is too thick/moist
Excessive accumulation of soot, the firebox does not self-clean during use	Wood is moist, incorrect adjustment of air inlet for combustion, the push valve is too closed, insufficient amount of wood (combustion space remains cold)
Glass on the door is heavily blackened by soot.	Wood is too moist, incorrect adjustment of air inlet for combustion, weak smoke flow through the chimney.
Wood burns quickly.	Strong smoke flow in the chimney, wood is too thin, primary air is improperly adjusted
Smoke is emitted from the stove during operation	Pipes are not securely connected, weak smoke flow through the chimney, kitchen extractor fan creates negative pressure in the room where the stove is installed

EM DIP d.o.o. Gutenbergova 14, 18103 Niš – Serbia		 1015		
EN 13240:2001, EN 16510-2-1				
Independence freestanding stove with intermittent burning for room (closed space) heating with closed chamber's door.				
<b>HOT HEX</b>				
Type/Model:			<b>HOT HEX</b>	
Serial number:			<b>01-2023</b>	
Production date:			06-2023	
Nominal heat output			[ kW ]	7,8
Efficiency			[ % ]	79,6
CO (13% O <sub>2</sub> )			[mg/Nm <sup>3</sup> ]	976
Particulate matter (PM) (13% O <sub>2</sub> )			[mg/Nm <sup>3</sup> ]	36
OGC (13% O <sub>2</sub> )			[mg/Nm <sup>3</sup> ]	87
NO <sub>x</sub> (13% O <sub>2</sub> )			[mg/Nm <sup>3</sup> ]	108
Seasonal energy efficiency			69,6	
EEI			105	
Flue gas outlet temperature			[ °C ]	247
Minimum flue draught			[ Pa ]	12
DoP:	<b>H2-23A-062023</b>	Test R No.	<b>172300040</b>	
Minimal distance to combustible materials				
Behind - 30 cm		Right/Left - 45 cm		
Front - 70 cm		Above > 75 cm		
Position of the opening for the chimney connection: above / back This stove could be connected on common chimney Recommended fuel: dry wood logs Notice: Follow instructions stated in <b>HOT HEX Manual</b>				