THE WARMTH OF HOME

DEFRO
home

Operating manual
Room heater

- [ ] DEFRO HOME QUADROOM
- [ ] DEFRO HOME QUADROOM LONG

Version

- [ ] SOLID

Original instructions
Edition 1
December 2025

DEFRO
home

DEKLARACJA ZGODNOŚCI UE
EU DECLARATION OF CONFORMITY
nr DH 9.1/P1/12/2025

DEFRO R. Dziubeła spółka komandytowa
ul. Powiatowa 111A
26-067 Ruda Strawczyńska

DEKLARUJE / DECLARES

z pełną odpowiedzialnością, że produkt / with all responsibility, that the product

Ogrzewacz pokojowy / Room heater

DEFRO HOME QUADROOM
DEFRO HOME QUADROOM LONG
DEFRO HOME SOLID

został zaprojektowany, wyprodukowany i wprowadzony na rynek zgodnie z następującymi dyrektywami:
has been designed, manufactured and placed on the market in conformity with directives:

Rozporządzenie Parlamentu Europejskiego i Rady (UE) 305/2011
Regulation (EU) No 305/2011 of the European Parliament and of the Council
- Wyroby budowlane (Dz. Urz. UE. L 88/5 z 04/04/2011)
Rozporządzenie Parlamentu Europejskiego i Rady (UE) 2024/3110
Regulation (EU) No 2024/3110 of the European Parliament and of the Council
- Wyroby budowlane (Dz. Urz. UE. L z 18/12/2024)
Rozporządzenie Delegowane Komisji (UE) / Commission Delegated Regulation (EU) 2015/1186 (Dz.Urz. UE L 193/20 z 21/07/2015)
Dyrektywa / Directive ErP 2009/125/WE - Ekoprojekt dla produktów związanych z energią (Dz.Urz. UE L 285/10 z 31/10/2009)
Rozporządznie Komisji (UE) / Commission Regulation (EU) 2015/1185 (Dz.Urz. UE L 193/1 z 21/07/2015)

i niżej wymienionymi normami zharmonizowanymi:
and that the following relevant Standards:

EN 16510-1:2022
EN 16510-2-1:2022
dokumentacja techniczna / technical documentation

Wyrób oznaczono znakiem:
Product has been marked:

CE

Ta deklaracja zgodności traci swą ważność, jeżeli w ogrzewaczu pokojowym DEFRO HOME QUADROOM / DEFRO HOME QUADROOM LONG / DEFRO HOME SOLID wprowadzono zmiany, został przebudowany bez naszej zgody lub jest użytkowany niezgodnie z instrukcją obsługi. Niniejsza deklaracja musi być przekazana wraz z urządzeniem w przypadku odstąpienia własności innej osobie.
This Declaration of Conformity becomes invalid if any changes have been made to the DEFRO HOME QUADROOM / DEFRO HOME QUADROOM LONG / DEFRO HOME SOLID room heater, if its construction has been changed without our permission or if the troom heater is used not in accordance with the operating manual. This Declaration shall be handed over to a new owner along with the title of ownership of the device.

Ogrzewacz pokojowy DEFRO HOME QUADROOM / DEFRO HOME QUADROOM LONG / DEFRO HOME SOLID jest wykonywany zgodnie z dokumentacją techniczną przechowywaną przez:
DEFRO HOME QUADROOM / DEFRO HOME QUADROOM LONG / DEFRO HOME SOLID room heater has been manufactured according to technical documentation kept by:
DEFRO R. Dziubeła spółka komandytowa, ul. Powiatowa 111A, 26-067 Ruda Strawczyńska.

Imię i nazwisko osoby upoważnionej do przygotowania dokumentacji technicznej: Mariusz Dziubeła
Name of the person authorised to compile the technical documentation:

Imię i nazwisko oraz podpis osoby upoważnionej do sporządzenia deklaracji zgodności w imieniu producenta: Robert Dziubeła
Name and signature of the person authorised to compile a declaration of conformity on behalf of the manufacturer:

Dwie ostatnie cyfry roku, w którym oznakowanie zostało naniesione: 25
Two last digits of the year of marking:

Ruda Strawczyńska, dn. 08.12.2025r.
miejsce i data wystawienia
place and date of issue

Robert Dziubeła
komplementariusz / general partner

Dear Customer,

We would like to inform you that we make every effort to ensure that the quality of our products meets restrictive standards and guarantees safety of use. All devices are manufactured in accordance with the requirements of relevant EU directives and bear the CE Safety Mark confirmed by the EU Declaration of Conformity.

CE

Your opinion about our company's operations is very important to us. We will appreciate any comments and suggestions from you regarding the equipment manufactured by us, as well as the service provided by our Partners and Service Department.

DEFRO R. Dziubeła sp.k.

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Any reproduction, copying, or publication of the contents of this Manual without prior written consent of DEFRO R. Dziubeła sp.k. is prohibited

Dear Customer,

Congratulations on your choice of a high-quality DEFRO product, which will ensure safety and reliability of use for a long time.

As our company's Customers, you can always rely on the assistance of the DEFRO Service Center, which is prepared to ensure the continuous efficiency of your appliance.

Please read the following instructions carefully, as following them is a condition for the correct and safe operation of the appliance.

- Read the User Manual carefully - it contains useful remarks concerning the correct use of the appliance.
- Check the completeness of the delivery and whether the appliance was not damaged during transport.
- Compare the data from the rating plate with the warranty card.
- Before starting the appliance, check whether the flue connection complies with the recommendations of this manual and the relevant national regulations.

During the operation of the appliance, follow the basic rules of use. It is forbidden to open the door while the appliance is operating.

In the event of an intervention, always contact the DEFRO Service Center or an Authorized DEFRO Service Partner, as only they possess original spare parts and are properly trained in the installation and operation of DEFRO appliances.

For your safety and comfort in using the appliance, please read this user manual and return a properly completed copy of the Warranty Card to the following address:

DEFRO R. Dziubeła sp.k. - Service Center
Powiatowa 111A
26-067 Ruda Strawczyńska

serwis@defro.pl

Returning the Warranty Card will allow us to register you in our database of DEFRO product users and ensure prompt service.

Failure to return or returning an incorrectly completed Warranty Card and the certificate of quality and completeness of the appliance within two weeks from the installation date, but no later than six months from the date of purchase **will void the warranty**! This entails delays in carrying out repairs and the necessity to **cover the costs** of all repairs and service call-outs.

Thank you for your understanding.
Sincerely,

DEFRO R. Dziubeła sp.k.

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1. INFORMATION

The operating manual constitutes an integral and essential part of the product and must also be handed over to the user in the event of a transfer of ownership. It should be read carefully and kept for future reference, as all the notes contained therein provide important guidance regarding safety during installation, operation, and maintenance.

The installation of the room heater must be carried out in accordance with the applicable standards of the destination country, according to the manufacturer's instructions, and by qualified personnel. Improper installation of the device may cause injuries to persons and animals as well as property damage, for which the manufacturer is not liable.

The room heater may only be used for the purpose for which it was explicitly intended. Any other use should be considered improper and consequently dangerous.

In the event of errors during installation, operation, or maintenance work resulting from failure to comply with applicable legislation, regulations, or instructions contained in this manual (or other materials provided by the manufacturer), the manufacturer waives any contractual or extra-contractual liability for the resulting damages, and the warranty for the device shall become void.

All illustrations, drawings, and photographs are for reference only.

Publication versions

Due to continuous product improvement, DEFRO reserves the right to update this publication without prior notice.

The content of this Operating Manual is the property of DEFRO. Any reproduction, copying, or publication of the content of this Operating Manual without prior written consent from DEFRO is prohibited.

Storage of the manual and how to view its contents

We recommend taking care of this manual and storing it in an easily and quickly accessible place. In case of loss, destruction, or damage to this manual, a copy should be requested at the product point of sale or directly from the Manufacturer, providing the product identification details. All more important information contained in the operating manual is highlighted in "bold print" and marked with symbols intended to draw the user's attention to hazards that may occur during the operation of the device. The symbols used in the text are explained below:

Danger!
Warning symbol indicating an immediate threat to health and life! Failure to observe instructions marked in this way and improper operation may cause death or serious injury.

Danger!
Warning symbol indicating a hazard related to electric voltage. Improper installation and improper electrical connection may pose a threat to life due to electric shock.

Caution!
Warning symbol instructing to read carefully and understand the provided information to which it refers. Failure to comply with these types of recommendations may cause serious damage to the device and endanger the user themselves or the environment.

Danger!
Warning symbol indicating a health hazard! Failure to follow recommendations highlighted in this way may result in fire or burns.

Tip!
Information symbol. Useful information and tips are marked in this way.

2. BASIC SAFETY RULES

2.1. Safety warnings

- National and local regulations must be fulfilled.
- The appliance must be installed in accordance with the legal standards applicable in the given location, region, or country.
- The device should not be used by persons (including children) with reduced physical, sensory, or mental capabilities, or persons lacking experience and necessary knowledge, unless they operate it under supervision or after proper instruction by a person responsible for their safety.
- For proper use of the device and in order to prevent accidents, always follow the instructions given in the operating manual.
- Operation and adjustment should be performed by adults. Errors or incorrect settings may create a hazardous situation and/or cause improper operation.
- Before starting any operation, the user (or any person undertaking the operation of the device) should read and understand the entire content of this manual.
- The appliance should only be used in accordance with its intended purpose. Any other use is considered improper and consequently dangerous.
- The appliance must not be used as a ladder or an object to lean on.
- Before installing the device, ensure that the base can withstand the pressure of the device, taking into account its weight.
- The device should be installed in a place that ensures adequate ventilation and air supply.
- In the event of operating malfunctions, the device may only be reignited after eliminating the problem that occurred and restoring it to its original condition.
- The user bears full responsibility for improper use of the product and relieves DEFRO of any civil and criminal liability.
- Any kind of modifications or replacement of device parts with non-original components without

authorization may pose a hazard to the operator and also relieves DEFRO of any civil and criminal liability.
- Improper installation or maintenance (inconsistent with the content of this manual) may cause injury to persons, animals, or property damage. DEFRO is then relieved of any civil or criminal liability.



- Some surfaces of the device are very hot (door, handle, glass, flue gas exhaust pipes, etc.). Therefore, direct contact with such components should be avoided without appropriate protective clothing or adequate protective equipment, such as heat-resistant gloves.
- Do not touch the glass when the device heats up.
- Keep children away from the device when it is operating, as any heated surface can cause burns.
- It is forbidden to operate the device when the door is open or the glass is cracked.
- Do not place or dry laundry on the appliance. Any clothes drying racks or the like should be placed at an appropriate distance from the device — fire hazard.
- In the event of a chimney flue fire, absolutely do not open the door. Then notify the appropriate services.
- The use of flammable liquids for lighting the device is completely prohibited.
- Do not allow the device to overheat, as it may cause discoloration of the casing.
- Maintain the minimum distances from combustible materials specified in sec. 5.2. of this operating manual.
- If the floor on which the device stands is made of flammable materials, such as parquet or carpeting, a non-combustible protective plate must be placed under the device. This plate should protect the area around the appliance in accordance with the distances specified in Table no. 4, but not less than 500 mm in front of the firebox opening and 300 mm at the sides and rear of the appliance.

2.2. Operating warnings



- In the event of a failure or malfunction, the device should be turned off.
- The fuel used in the device must meet the conditions described in this manual.
- Internal parts of the appliance must not be washed with water.
- Do not allow contact with water, and above all do not wash, any painted coatings before they are cured. The coating of new devices is not an anti-corrosion coating; the heat-resistant paint gains its protective properties only after curing under the influence of heat (after several firings).
- Do not expose the body to hot air for a long period of time. Do not overheat the room where you stay and where the device is installed. This may adversely affect physical condition and cause health problems.
- The device should be installed in rooms with fire protection and equipped with all required components, such as power supply (air supply), flue gas exhaust, and a fire extinguisher.
- The device and ceramic claddings should be stored in rooms free of moisture; they must not be exposed to the harmful effects of atmospheric factors.
- It is not recommended to place the body of the device directly on the floor, and if the latter is made of a flammable material, it should be properly insulated.
- In order to facilitate any interventions by technical personnel, do not place the device inside closed spaces or right next to walls, which may also disrupt air intake.
- Always make sure and verify that the combustion chamber door is tightly closed while the device is operating.
- The appliance consumes as much air as is necessary for the combustion process; It requires connection to an external air intake with an appropriate pipe via the air intake connector.

ADDITIONAL INFORMATION



- In case of any difficulties, contact the point of sale or qualified personnel authorized by DEFRO, and if repairs are necessary, demand original spare parts.
- Only use fuel with properties complying with the recommendations of this operating manual.
- Periodically inspect and clean the flue gas exhaust ducts (connector to the chimney flue).
- Keep this manual carefully, as it should be available throughout the entire service life of the device. In case of selling the device or transferring it to another user, always make sure that the manual is included with the product.
- If it is lost, request a new copy from an authorized point of sale or from DEFRO.



Read and follow the operating manual.



Use only recommended fuels.

3. INTENDED USE

DEFRO HOME QUADROOM series room heaters are designed for burning wood from deciduous trees (birch preferred) with a moisture content below 20%. They are used to heat houses and spaces in which they are installed. They can also be used as an additional source of heat energy. They are suitable for shared flue connection.

Room heaters of the DEFRO HOME QUADROOM series are classified as intermittent combustion appliances of type CM with a closed combustion chamber.

4. TECHNICAL CHARACTERISTICS

4.1. Design

The body (1) of the heater consists of a steel jacket containing a combustion chamber lined with heat-resistant concrete liners (9). The body is encased in panels made of powder-coated sheet steel.

Fuel loading into the combustion chamber takes place through a corner loading door equipped with heat-resistant glass and a handle (4). Inside the chamber there is a grate (5), under which an ash pan drawer (6) is located. In the upper part of the combustion chamber, deflectors are installed that direct the flue gas flow and increase the degree of heat exchange. Additionally, in the rear wall of the combustion chamber there are openings of the flue gas afterburning system (12).

The air necessary for the combustion process is supplied through the air intake connector (intake) located under the combustion chamber. The amount of supplied air is adjusted by means of a regulator located on the side of the appliance casing (8). The air duct can be routed through an opening in the base of the heater or in the rear panel.

Hot air is emitted directly from the firebox through the glass and by radiation through convection openings in the upper wall of the appliance.

Flue gases are discharged into the chimney through the flue socket (13) located in the upper wall of the heater with the possibility of changing its position (sec. 5.4.1)

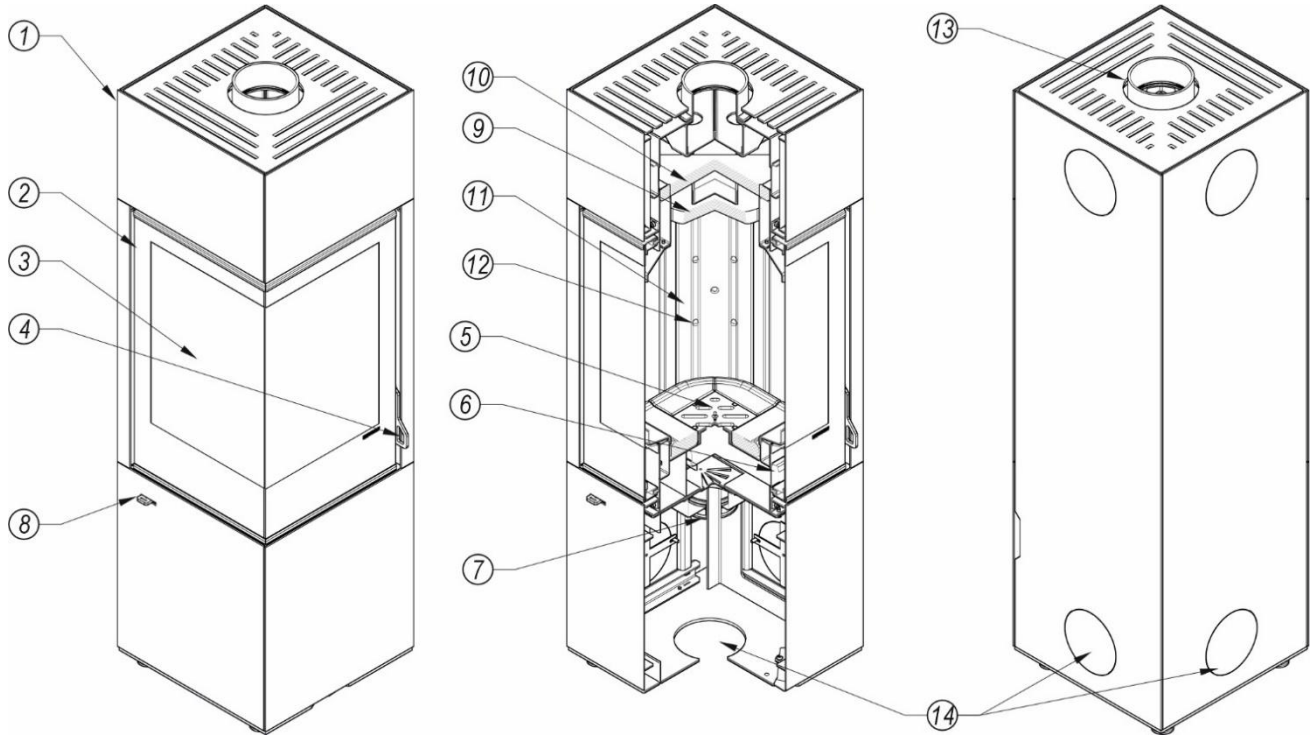


Figure.1 Appearance and construction of the DEFRO HOME QUADROOM LONG (SOLID) heater.

1-body, 2-door, 3-heat-resistant glass, 4-handle, 5-grate, 6-ash drawer, 7-air intake connector, 8-air supply regulator slider, 9-combustion chamber deflector; 10-upper deflector, 11-heat-resistant concrete liners, 12-flue gas afterburning system openings, 13-flue socket, 14-air supply connections

4.2. Technical Data

Table.1 Technical data of the DEFRO HOME QUADROOM series heater

Parameters	Unit	DEFRO HOME QUADROOM 2.0 DEFRO HOME QUADROOM PLS 2.0	DEFRO HOME QUADROOM LONG DEFRO HOME QUADROOM LONG (SOLID)
Nominal thermal output	kW	9,0	8,0
Nominal thermal output transferred to the room	kW	9,0	8,0
Appliance efficiency at nominal thermal output	%	80,7	81,3
Seasonal space heating efficiency at nominal thermal output	%	71	71
Energy Efficiency Index EEI		107	108

Emissions at O_2 content of 13% at nominal output	CO	mg/m^3	≤1500	
	NOx		≤200	
	OGC		≤120	
	dust		≤40	
Exhaust gas temperature at the outlet at nominal thermal output		°C	324	276
Flue gas mass flow at nominal thermal output		g/s	7,8	8,0
Total leakage rate		m^3/h	2,9	2,5
Minimum chimney draught at nominal thermal output		Pa	12	
Chimney class			T400 G	
Load-bearing capacity		kg	100	100
Flue outlet diameter		mm	150	150
Air intake connector diameter		mm	125	125
Recommended log length		mm	250 (2 logs)	200 (2 logs)
Recommended fuel load for combustion time			1.9 kg / 42 min	1.7 kg / 41 min
Fuel type			I (birch wood)	
Heater type			intermittent combustion (INT)	
Appliance type			CM	

Table 2. Appliance weight depending on the selected design version and equipment.

Appliance name	QUADROOM 2.0	QUADROOM PLS 2.0	QUADROOM LONG	**QUADROOM LONG (SOLID)**
Weight ±5 kg	175		179	222

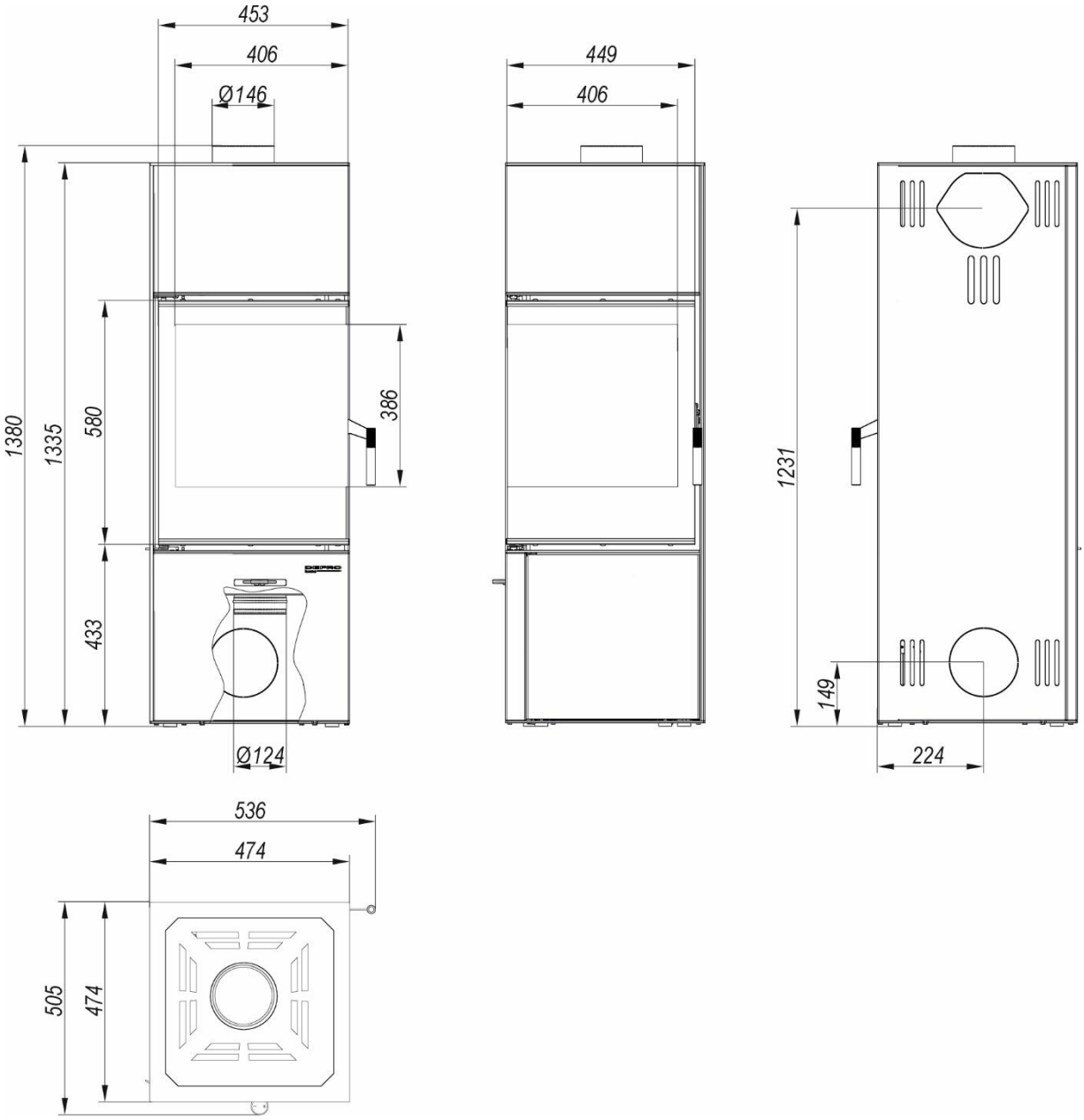


Figure 2. Dimensions (mm) of the room heater DEFRO HOME QUADROOM 2.0

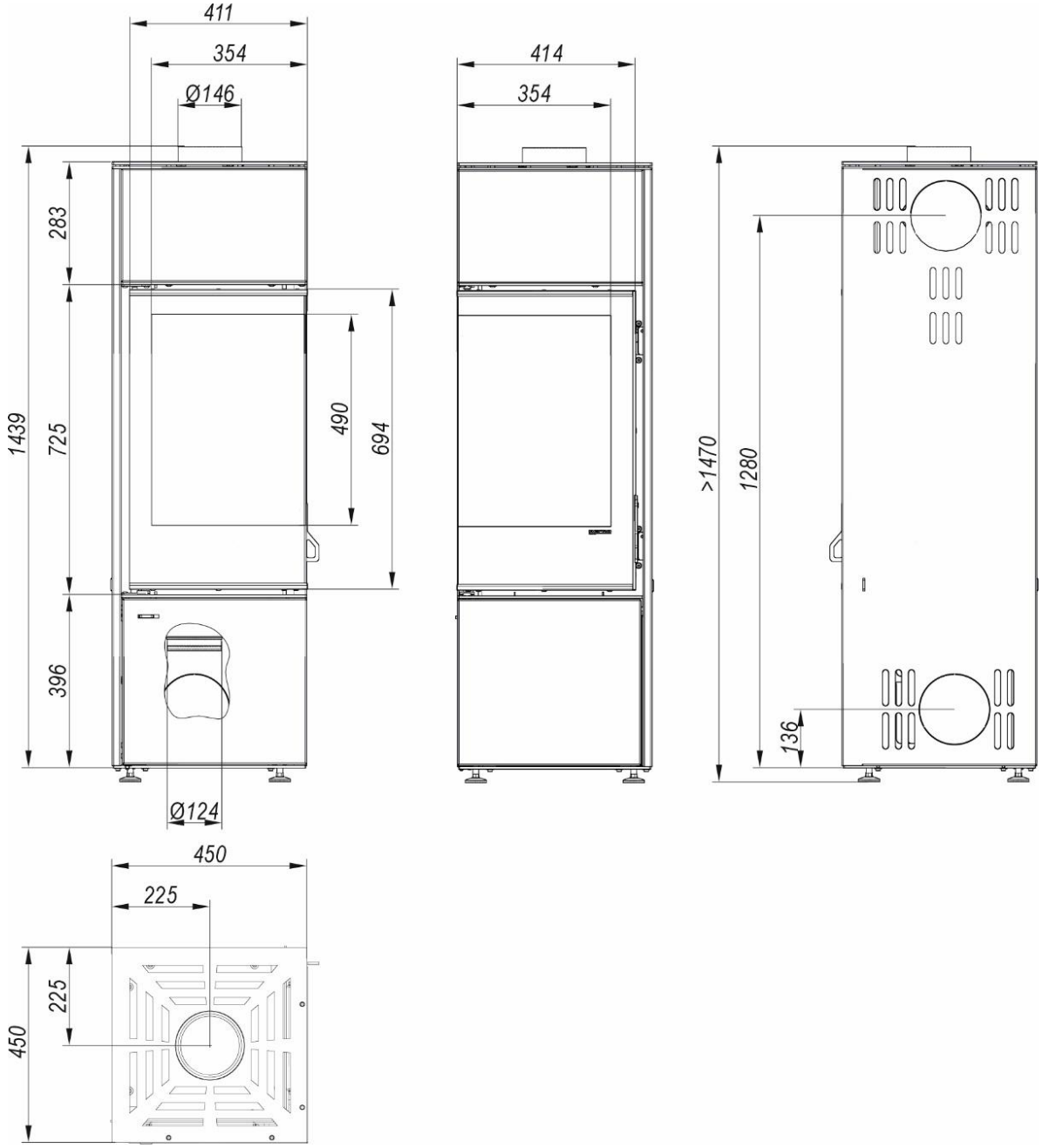


Figure 3. Dimensions (mm) of the room heater DEFRO HOME QUADROOM LONG

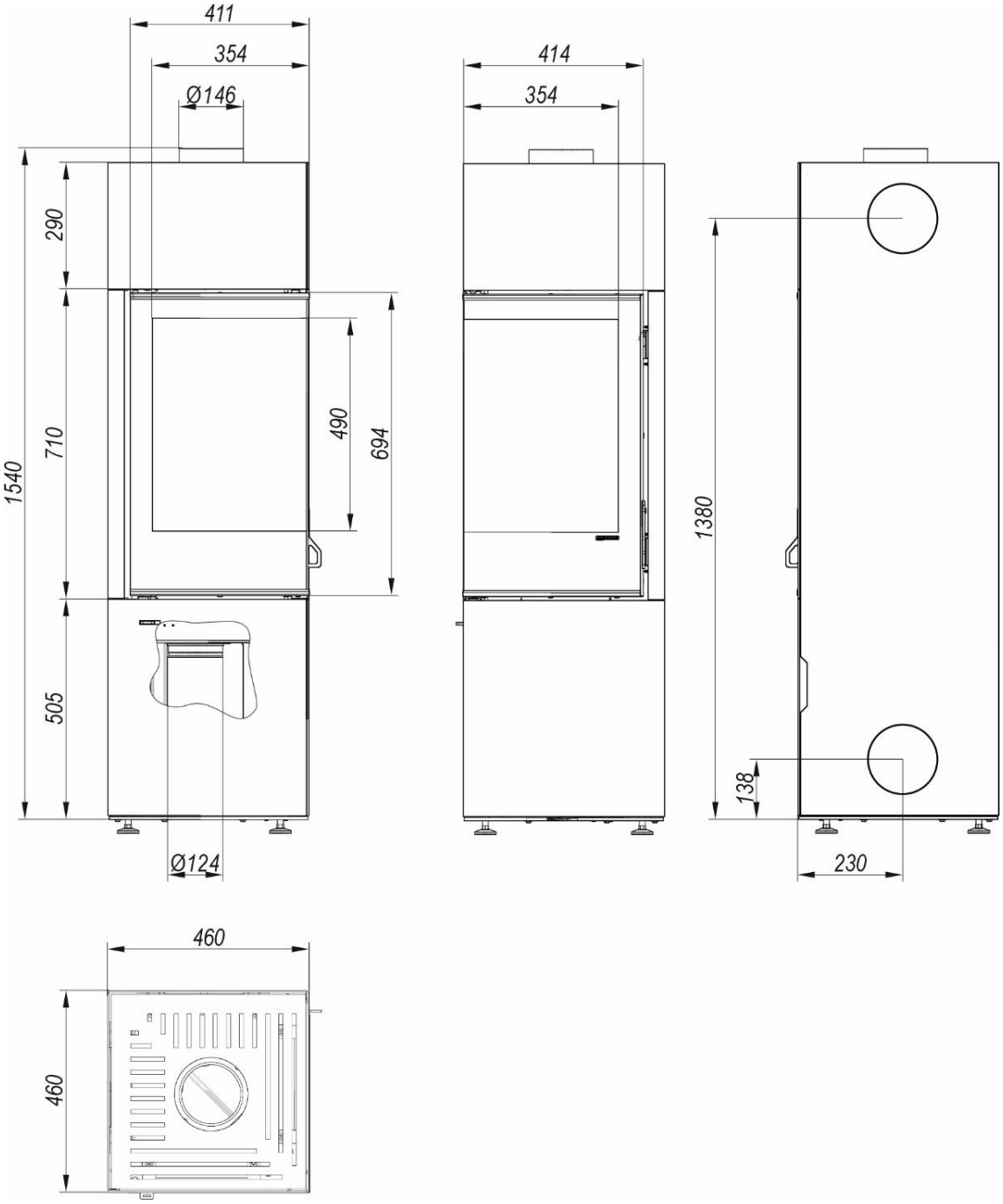


Figure 4. Dimensions (mm) of the heater DEFRO HOME QUADROOM LONG (SOLID)

4.3. Equipment

The room heater is supplied assembled on a pallet wrapped in foil packaging. The scope of delivery may include additional elements and components according to the user's order. The items included in the standard equipment are listed in the table below.

Table 3. Equipment of the heater

Standard equipment	Unit	quantity
Operating manual of the room heater	pcs.	1
Warranty card of the heater	pcs.	1
Ceramic lining of the combustion chamber	set	1
DH sponge	pcs.	1
Flue top socket blanking plug	pcs.	1
Grate removal handle	pcs.	1
Protective glove	pcs.	1

4.4. Fuel parameters

The heater is designed for burning hardwood (birch) seasoned under appropriate conditions for at least 2 years. Burning wet wood is unacceptable (heavy fouling of the fireplace, soot emissions, and reduced energy efficiency of the appliance).

Fuel parameters

- Calorific value >15,000 kJ/kg
- Moisture content <20%
- Recommended log length: in accordance with Table 1

The use of all other fuels is prohibited, including coal, softwood, tropical wood, and any liquid fuels.

Burning any types of garbage or wood waste is prohibited. Firing the heater with impermissible materials may cause damage to the appliance and pose a hazard to the life and health of users (toxic fumes of chemical substances).

The use of poor quality fuel or fuel not compliant with the above recommendations causes malfunctions in the operation of the appliance and, consequently, may lead to the voiding of the warranty and a disclaimer of liability for the product.

The heater is not an incinerator for waste and prohibited fuels must not be burned in it.

Wood should be seasoned for at least 2 years. Burning wet wood, which is characterized by a low calorific value, reduces efficiency, causes faster soot build-up, and adversely affects the lifespan of the appliance.

It is not recommended to use wood from coniferous and resinous trees as fuel. This causes heavy smoking and the need for more frequent cleaning of the appliance and the flue pipe.

It is prohibited to burn coal, tropical wood, chemical products, liquid fuels, e.g. oil, alcohol, gasoline, naphthalene, laminated or impregnated boards, etc., paper, cartons, old clothes, garbage.

Do not exceed the recommended amount of loaded fuel, as this may cause the appliance to overheat.

DEFRO R. Dziubeła sp.k. shall not be liable for damage or improper combustion resulting from the use of inappropriate fuel.

4.5. Spare parts

To obtain information regarding the availability of spare parts for the heater or to enquire about appliance servicing, please contact the DEFRO Service Centre or an Authorised DEFRO Service Centre.

DEFRO R. Dziubeła sp.k.
Service Centre
St. Powiatowa 111A
26-067 Ruda Strawczyńska

serwis@defro.pl

5. TRANSPORT AND INSTALLATION

5.1. Transport and storage

The heater is supplied assembled on a pallet in foil packaging. It is recommended to transport the heater in such packaged state as close to the target installation location as possible, which will minimize the risk of damaging the appliance's casing.

Use suitable hoists to lift and lower the appliance. Prior to transporting the heater, it should be secured against shifting and tilting on the vehicle platform using straps, wedges, or wooden blocks.

The appliance must be transported in an upright position!

All packaging residues must be removed in a way that does not pose a hazard to people and animals.

The transport rope securing the ceramics against damage during transport must be removed after installing the appliance.

The appliance should be stored in unheated, necessarily roofed, and ventilated rooms.

Before installation, check the completeness of the delivery and its technical condition, and **remove all transport protections!**

During transport, ceramic components may slide apart. Prior to operating the appliance, they should be properly pushed together.

5.2. Working environment

All local regulations, including regulations referring to national and European standards, must be observed when installing the appliance.

In Poland, these conditions are regulated by:

- ***Regulation of the Minister of Infrastructure of 12 April 2002 on the technical conditions to be met by buildings and their location. (Journal of Laws No. 75 of 2002, item 690, as amended).***

- ***PN-EN 16510-1 Residential solid fuel burning appliances - Part 1: General requirements and test methods.***

The heater should be installed in a suitable location that allows the door to be opened and ordinary maintenance work to be carried out. The environment should be:

- adapted to operating conditions,
- equipped with a 230V/50Hz power supply,
- equipped with a suitable flue gas exhaust system,
- equipped with an external ventilation system,
- equipped with a CE-certified grounding system.

To ensure proper operation of the heater, an adequate supply of air required for combustion and ventilation must be guaranteed in accordance with the installation standards and standards in force in the respective country. It should be assumed that burning 1 kg of wood requires ~8 m^3 of air. The volume of the room in which the appliance is installed should result from the indicator of 4 m^3 per 1 kW of rated heat output, but must not be less than 30 m^3.

If several appliances are used in one room, the combustion air demand must be ensured individually for each of them.

The heater should be placed on a base with adequate load-bearing capacity. In accordance with Polish Standards, each square metre of ceiling in a single-family house must withstand a load of 150 kg. Before proceeding with installation, verify the load-bearing capacity of the structure, taking into account the weight of the appliance and its footprint area. If this condition is met, the heater manufactured by DEFRO can be installed without the need to reinforce the ceiling.

Nevertheless, in case of uncertainty regarding the ceiling structure or if the load-bearing capacity of the ceiling is insufficient, it is imperative to contact a structural engineer to reinforce the ceiling or construct a dedicated structure that distributes the weight over a larger area

The floor in the room where the room heater is to be installed should be properly dimensioned to support the weight.

Proper positioning of the heater is essential to achieve a satisfactory level of heating in the dwelling and safe use. The minimum clearances from the walls and surfaces of the appliance to combustible materials are specified in Table 4.

Radiation, especially through glass surfaces, can cause combustible items surrounding the appliance to ignite.

Table 4. Fire safety

Minimum clearances of appliance walls / surfaces from combustible material for individual appliances

Minimum distance to combustible material:	Unit	**DEFRO HOME QUADROOM 2.0 DEFRO HOME QUADROOM PLS 2.0**	**DEFRO HOME QUADROOM LONG DEFRO HOME QUADROOM LONG (SOLID)**
rear wall d_R	mm	300	300
side walls d_S	mm	300	300
side walls d_{S1}	mm	300	400
top surface to ceiling d_C	mm	>750	>750
front wall d_P	mm	1000	1500
front wall in the lower front radiation area d_F	mm	500	700
front wall in the lateral front radiation area: d_L for d_{S1}	mm	300	700
bottom surface d_B	mm	non-combustible floor required	

The distance between the appliance and walls made of non-combustible materials should be at least 80 mm.

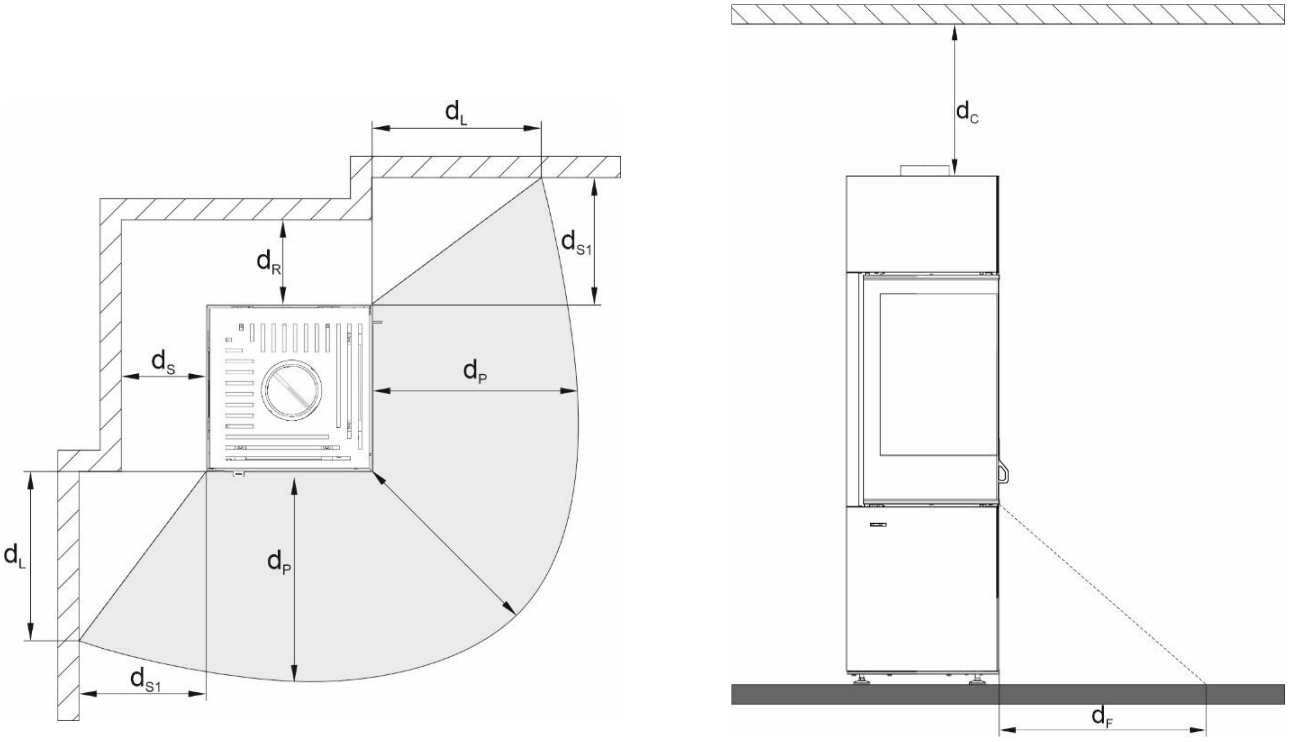


Figure 5. Distances to combustible materials

If it is not possible to maintain the distances indicated above, technological and construction measures must be applied to avoid any fire risk.

In the case of a floor made of flammable materials, a floor protection surface must be prepared and protection provided in accordance with the standards in force in the given country.

The room in which the heater is installed requires effective ventilation necessary to remove moisture, carbon dioxide, and other pollutants. Ventilation can be provided by making permanent ventilation openings in an exterior wall or by using individual or collective ventilation ducts.

For this purpose, a through opening with a free cross-section of 100 cm^2 (an opening with a diameter of 12 cm or a square of 10 x 10 cm), protected by a grille on the inside and outside, should be made in the exterior wall near the heater. Air intake grilles must not close automatically. In addition, the air inlet should be:

- connected directly to the room where the free-standing heater is planned to be installed,
- protected by a grille, metal mesh, or a suitable cover that does not restrict the minimum cross-section,
- positioned in such a way that it cannot become blocked,
- located while maintaining appropriate distances to prevent air turbulence (relative to windows).

Exhaust fans operating in the same room or space as the appliance may cause problems

It is forbidden to install the appliance in:

- places with high humidity (e.g., laundry rooms, saunas, bathrooms)
- rooms without windows and ventilation,
- ventilation systems where the pressure is lower than -15 Pa.
- rooms with a volume smaller than specified by regulations
- rooms with stored flammable materials, e.g. walk-in closets

5.3. Connection to an external air intake

Heaters of the DEFRO HOME QUADROOM series are appliances with a closed combustion chamber that draw the air necessary for the combustion process directly from outside the building via a dedicated air supply duct. The diameter of this duct should be equal to or greater than the diameter of the appliance's air intake connector, specified in Table 1. The external air inlet should be located above ground level, protected with a protective mesh, and located away from the flue gas outlet. During operation and cleaning of the air grille, the shut-off damper should be open.

Heaters of the DEFRO HOME QUADROOM series offer two connection variants for the external air intake: from the rear or from the bottom of the appliance. The heater is factory-configured for connecting the air duct from the bottom. Changing the supply to the rear only requires passing the air duct through the opening in the rear wall.

It is forbidden to use mechanical exhaust ventilation when the heater is not connected to a sealed external air intake.

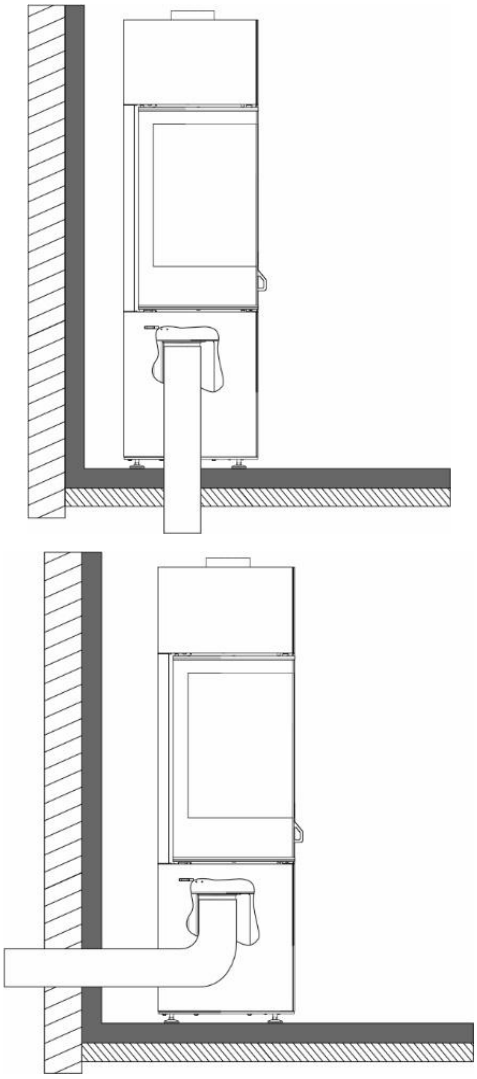


Figure 6. Connecting the heater to an external air intake.

5.4. Connection to the chimney flue

Each chimney installation must be considered individually. Applicable national installation and building regulations must be complied with, along with the requirements of relevant standards, including EN 13384-1:2015+A1:2019 and the appropriate part of EN 15287 (EN 15287-1 or EN 15287-2), depending on the appliance type.

Correct chimney operation must be verified in accordance with EN 13384-2:2015+A1:2019 depending on the individual on-site conditions.

The heater should be connected to an individual chimney (flue) duct. The minimum chimney draught should be: 12 Pa.

If the chimney draught is too low, the heater must not be operated.

When making an opening for routing the flue pipe, the possible presence of flammable materials nearby must be taken into account. If the opening is to pass through a wooden wall or one made of heat-sensitive material, it is mandatory to maintain the minimum distance from combustible materials specified on the flue pipe certification label.

If necessary, additional thermal insulation with a thickness of at least 6 cm, made of materials with a thermal conductivity not exceeding 0.04 W/(m K), must be applied to protect structural elements from excessive heating.

Alternatively, it is recommended to use an insulated industrial pipe that can also be used outdoors to prevent condensation.

For proper operation, the connection between the room heater and the chimney flue or smoke duct should be made according to the following recommendations:

- horizontal sections must have a minimum upward slope of 3%,
- the length of the horizontal section must be minimal and not exceed 2/3 of a metre,
- the number of direction changes, including the use of a "T"-shaped element, must not exceed 4.

The chimney or single smoke duct must meet the following requirements:

- be resistant to combustion products, impermeable, and properly insulated in accordance with the conditions of use,
- be made of materials resistant to normal mechanical stress, heat, the action of combustion products, and possible condensate,
- run vertically with an axis direction change not exceeding 45°,
- be adequately spaced with an air gap or properly insulated from combustible or flammable materials,
- preferably have a circular internal cross-section: a square or rectangular cross-section must have rounded corners with a radius of not less than 20 mm,
- the internal cross-section must be constant, free, and independent,
- have a rectangular cross-section with a maximum aspect ratio of 1.5 between the two sides.

The connection to the chimney flue should provide access for cleaning the connector, and the entire chimney system should be equipped with appropriate inspection openings closed with tight doors.

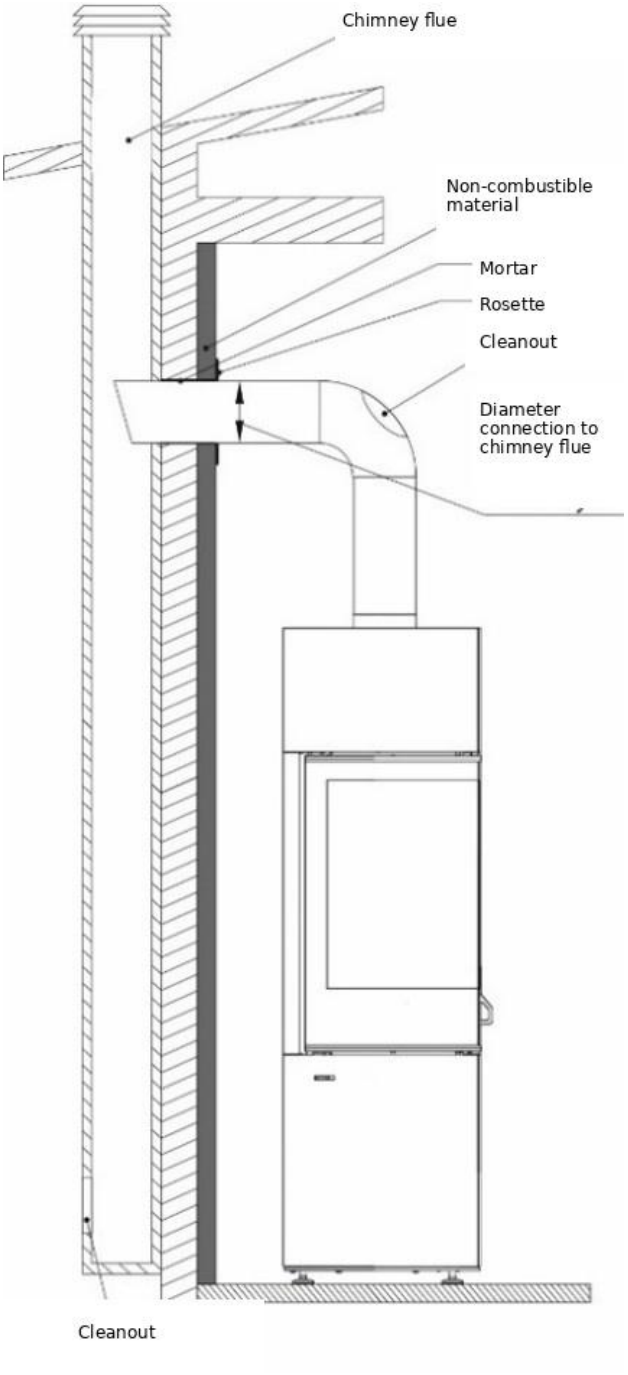
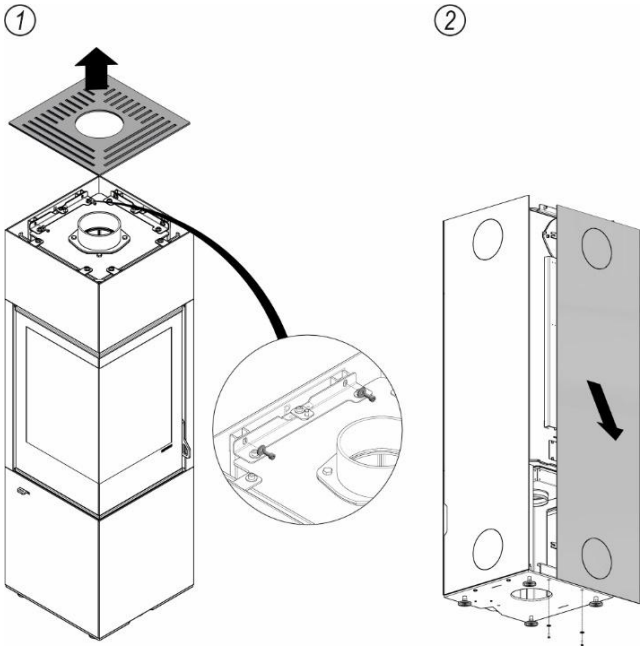


Figure 7. Connecting the heater to the chimney flue.

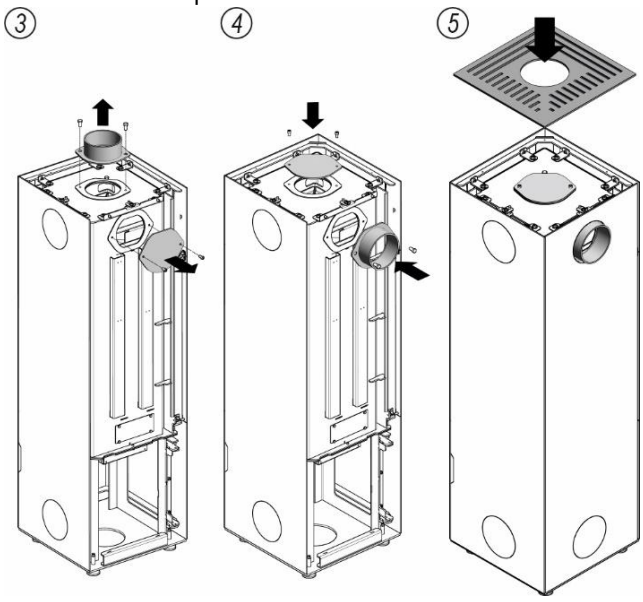
5.4.1. Repositioning the flue outlet

Heaters of the DEFRO HOME QUADROOM series offer the possibility of connecting the flue outlet in three positions. The flue gas outlet connector is factory-installed on the top wall of the appliance. Additionally, there are capped openings on the two side walls. The figures below show the process of repositioning the flue outlet. After completing the work, check the condition of the gaskets.



Step 1. Lift the plate from the top wall of the heater, unscrew the screws securing the outer panel of the chosen side.

Step 2. Unscrew the screws securing the panel to the base, then slide out the panel.



Step 3. Remove the blanking plate from the opening on the side wall of the heater, unscrew the screws securing the flue outlet connector while supporting the baffle to which the flue outlet is attached,

Step 4. Screw the blanking plate on the top wall of the heater to the upper baffle structure and install the flue outlet connector in the side wall

Step 5. Break out the blanking plate in the panel, then assemble the unit by tightening the screws at the top and bottom of the appliance, place the top plate of the heater, and install the cover.

Figure 8. Repositioning the flue outlet

6. OPERATION AND USE

During the use of the appliance, all local regulations must be observed, including those referring to national and European standards.

6.1. Preliminary notes

Do not touch the heater during the first lighting, as the paint cures during this phase.

Touching the paint could expose the steel surface.

If necessary, the paint can be touched up using spray paint of the same colour.

Ensure effective room ventilation during the first lighting, as a small amount of smoke and paint odour will be emitted from the heater.

Do not stay near the heater, and it is necessary to ventilate the room. The smoke and paint odour will disappear after about an hour of operation. However, we remind you that they are not harmful to health.

During the heating and cooling phases, the heater expands and contracts, which may cause slight cracking sounds. This is an entirely normal phenomenon, as the appliance's structure is made of rolled steel, and this phenomenon cannot be considered a defect.

As a result of high temperatures during use and subsequent cooling of the appliance, the steel structure expands and contracts. This may cause metallic sounds during temperature changes. This is a completely normal phenomenon and should not be considered a product defect.

It is very important that the heater is not excessively overheated right away, but brought gradually to the desired temperature. Low heating powers should be used. During subsequent lighting of the fire, the full available heat output can be used. In this way, damage to ceramic tiles, welds, and the steel structure will be avoided.

Burning a single portion of wood significantly larger than that specified in Table 1 causes the appliance to overheat. Continuous overheating may cause discolouration of the appliance casing, for which the manufacturer bears no responsibility.

Do not expect immediate heating effects!

The first three lightings should be carried out using 1/3 of the recommended fuel load in order to complete the curing and possible drying process of the ceramic elements in the appliance.



Figure 9. Examples of discolouration resulting from overheating the appliance.

6.2. First start-up and operation

Verification of correct and tight connection of the appliance, preparation for operation in accordance with this manual and applicable regulations, as well as the first start-up and user training regarding the operation of the appliance and its maintenance may only be performed by the <u>MANUFACTURER'S AUTHORISED SERVICE.</u>

The corner panes of the appliance must be pushed tightly together. If leaks still occur, the glass corner must additionally be sealed with heat-resistant silicone.

The final adjustment of appliance components, e.g. door adjustment, is performed by the installer / fitter.

In the event of the glass panes shifting apart in the appliance, re-adjusting them, i.e. "pushing them back together", is the user's responsibility.

The recommended method for lighting room heaters is top-down lighting. Before proceeding with lighting, set the air supply control slider to the maximum open position (marking on the handle, shown in Figure 10). Then open the heater door and arrange the fuel on the grate in layers: place split thick logs at the bottom, another layer of slightly thinner logs, and at the top arrange small kindling sticks, among which ecological firelighters can also be placed and lit. It is important that there is free space between each of the logs and kindling sticks (approx. 1 cm).

Use only the recommended fuels consistent with the characteristics presented in sec. 4.4.

Never use petrol, lamp oil, kerosene, lighter fluid, ethyl alcohol, or similar liquids to ignite or "restart" the fire in the heater. All such liquids must be kept away from the heater when it is in use;

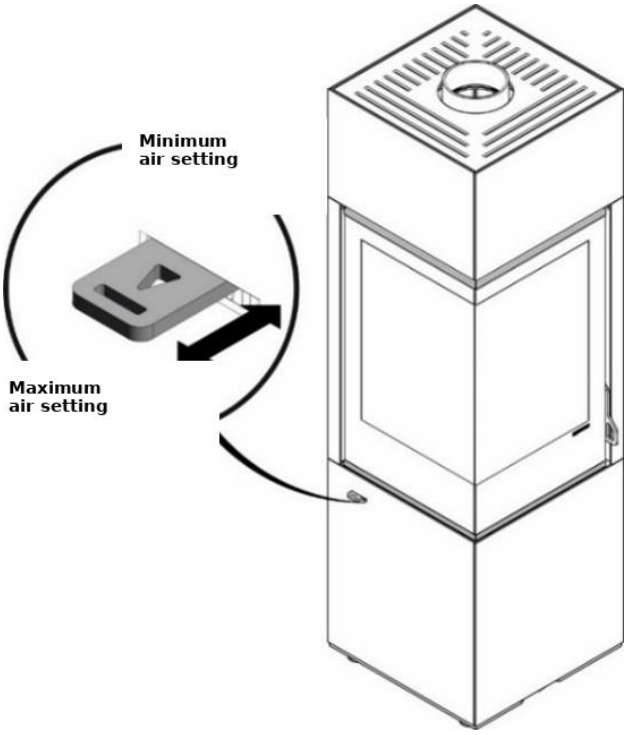


Figure 10. Air supply control

During burning, the door should only be opened when adding fuel.

Fuel should be loaded after the flame has died down, when only a layer of embers remains in the combustion chamber. Before adding wood, spread the remaining layer of embers, wait 4–10 minutes, and fill the combustion chamber with wood in accordance with Figure 11. The criterion for the end of the combustion cycle should be taken as a CO_2 emission level of approximately 3–5%.

The recommended fuel load is given in Table 1.

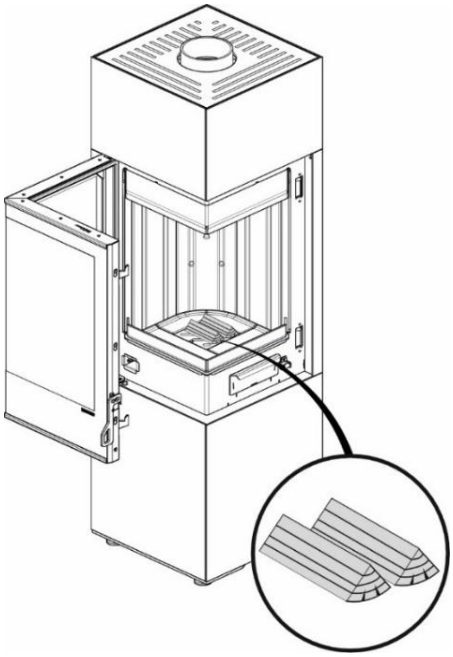


Figure 11. Fuel arrangement method

After approx. 2–3 minutes from loading, a proper flame should have a light yellow color and a length of approx. 2–3 minutes from loading, a light yellow color and a length of approx. 20–40 cm depending on the device output. The intensity of the combustion process should be adjusted using the "air supply control slider" so that the burning time of the load corresponds to the values given in Table 1. In the event of problems with obtaining a proper flame in a short time, increase the damper opening, and after ignition set the target position.

Never stand directly in front of the heater when opening the door. This poses a risk of burns.

When replenishing fuel, pay special attention not to damage the ceramic lining.

During the first hours of burning, the smell of body paint will be released. This is completely normal. During this time, ventilate the room intensely. After the fuel has completely burned out and the device has cooled down, check the tightness of the connections once again.

During operation, the casing components reach high temperatures. Exercise particular caution.

Before each subsequent start-up of the device, empty the ash pan (see section**Fehler! Verweisquelle konnte nicht gefunden werden.**). The glass should also be cleaned. Do not use abrasive materials.

6.3. Extinguishing

Extinguishing occurs by closing the primary air supply; in this case, wait for the fuel to burn out on its own.

If it is necessary to extinguish the flame quickly, cover the combustion chamber with dry sand or ash. It is unacceptable to extinguish the fire by pouring water, as this risks damaging the device components.

After a prolonged shutdown period, check the patency of the chimney flue.

7. MAINTENANCE AND CLEANING

All activities related to cleaning all components should be carried out when the heater is completely cold. The use of protective gloves is required.

It is forbidden to clean the device (all painted elements and seals) using chemicals, liquids, and damp cloths, towels, rags, etc. in case of non-compliance with the above rules, discoloration and sources of corrosion may occur, which are not covered by the warranty.

It is good practice to ensure adequate room ventilation while cleaning the device.

7.1. Basic user operation and cleaning

All activities must be performed with particular care and may only be carried out by adults who

have read these instructions. Ensure that children are not nearby while cleaning the appliance.

Wear gloves, protective eyewear, and headwear for maintenance.

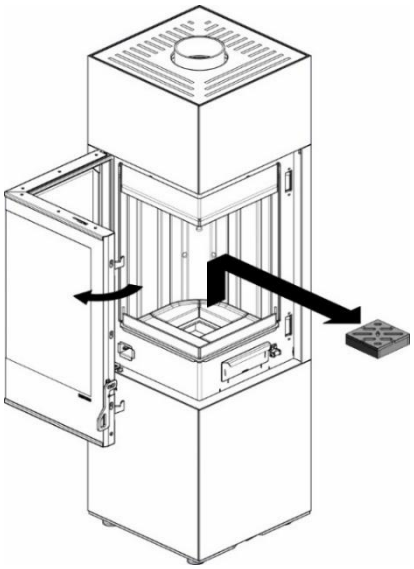
7.1.1. Cleaning before each start-up

Strictly before each start-up, check and, if necessary, clean the flue gas ducts of the device.

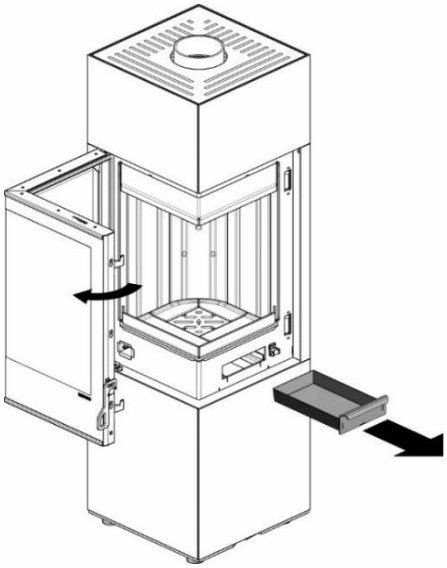
Regularly check the patency of the flue gas ducts.

Before each subsequent start-up of the device, clean and empty the ash drawer, handling hot ash with care.

To do this, first remove the grate and then the ash drawer. Only if the ash is completely cold can it be removed with a vacuum cleaner. In this case, use a vacuum cleaner adapted to vacuum particles of a specific size. After cleaning is complete, put the ash drawer and the grate back in place, ensuring they are positioned correctly. It is advisable to vacuum both the ash pan chamber and the combustion chamber.



1. Grate



2. Ash drawer.

Figure 12. Cleaning the heater

7.1.2. Cleaning the glass

Cleaning the glass may only be carried out when the device is not operating and is at room temperature.

We recommend using only the DH sponge to clean the heater glass panels. The sponge is intended solely for cleaning glass. Do not use it to clean seals or metal parts. It is also not suitable for cleaning pyrolysis glass. The sponge can be used several times, depending on the degree of dirt on the heater glass. Clean using the grey side, and shake it off each time after use.

Each time before cleaning the glass, protect painted components, surfaces, and seals from getting wet, as this accelerates their wear. Failure to protect the cords surrounding the glass results in the loss of their properties, e.g.: soaking in chemicals and reacting with high temperatures, causing damage to the glass.

We do not recommend using any fireplace glass cleaners, liquids, or chemicals. Do not use products that may scratch the glass. The ash may contain substances that scratch glass ceramic.

The use of abrasive agents or materials is prohibited due to the risk of scratching the glass coating.

The use of chemical cleaning agents is prohibited, as contact with such agents may cause damage to the room heater components, i.e.: the print on the glass, the glass itself, seals, painted surfaces.

Do not open the door to clean the glass while the device is in operation. Cleaning the glass is only possible when the device is cold.

7.1.3. Door / seals

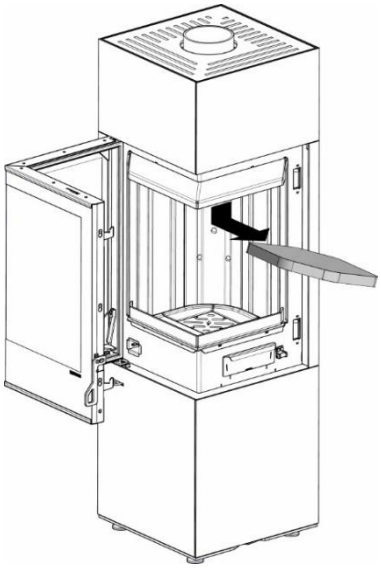
Friction surfaces of the door hinges and closing mechanism should occasionally be lubricated with graphite grease. Before each heating season, inspect and clean the entire appliance. Pay special attention to the condition of the seals; replace them if necessary.

It is forbidden to use the device with a damaged seal around the door and the combustion chamber.

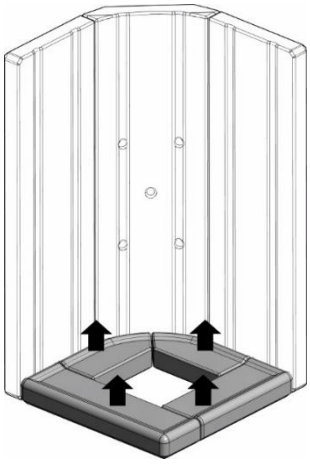
When dismantling the door, pay particular attention to the presence of the torsion spring **in** the bottom hinge, which is part of the door self-closing mechanism

7.1.4. Combustion chamber

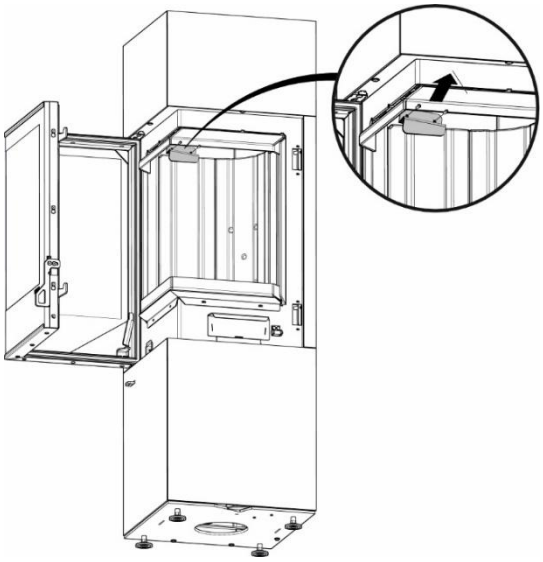
Periodically, depending on the moisture content and species of the wood used, clean the combustion chamber of the device. To do this, you can remove the heat-resistant plates of the chamber, following the instructions below, and carry out the cleaning.



Step 1. Remove the lower deflector of the heater



Step 2. Remove the grate and bottom plates



Step 3. Unscrew the fastening screws of the vertical linings



Step 4. Remove the side wall linings and then the corner lining.

Figure 13. Dismantling the heat-resistant plates of the combustion chamber

7.1.5. Flue pipe

In accordance with applicable regulations, cleaning of the flue pipe should be carried out at least once a quarter. The flue cleaning should be performed by a chimney sweep company, and this fact should be documented in the Warranty Book.

Flue gases escaping from a clogged chimney are dangerous. Keep the chimney and connector clean. They should be cleaned before each heating season.

Fumes resulting from a chimney blockage are dangerous. Keep the chimney and flue pipe clean; clean according to instructions.

The flue gas ducts of the device must be kept clean; clean in accordance with the instructions.

Use only recommended fuels.

Read the instruction manual.

After a prolonged shutdown period, check the patency of the chimney flue.

7.2. Periodic inspection by an authorized service center

After the heating season has ended, it is necessary to clean the chamber through which the flue gases flow. This cleaning is mandatory and aims to remove all combustion residues.

Periodic inspection of the device should be performed exclusively by qualified manufacturer service personnel.

7.3. Decommissioning

After the end of each heating season, it is recommended to completely shut down and clean the device.

When the device is not in use, it is recommended to close the air intake damper to prevent the absorption of moisture by the ceramiton.

8. TROUBLESHOOTING

During the operation of the device, certain anomalies may occur, indicating irregularities in its operation. This may be caused by incorrect installation of the device without complying with applicable building regulations or the provisions of this manual, or due to external factors, e.g. the natural environment.

Below are the most common causes of device malfunction along with the methods for resolving them.

Smoke backdraft with the door open:

- opening the door too abruptly (open the door slowly);
- if a damper has been installed as a chimney draft regulator − open the damper each time the door is opened;
- insufficient air supply to the room where the device is installed (ensure adequate room ventilation or supply air to the combustion chamber in accordance with the manual guidelines);
- weather conditions: low pressure, fog and precipitation, sudden temperature changes;
- insufficient chimney draft (have the chimney flue inspected by a chimney sweep).

Insufficient heating or extinguishing:

- small amount of fuel in the combustion chamber (load the combustion chamber according to the instructions);
- too high moisture content of the wood used for burning (use wood with a moisture content of up to 20%); a large part of the acquired energy is lost in the process of water evaporation:
- insufficient chimney draught (have the chimney flue inspected by a chimney sweep).

The phenomenon of insufficient heating despite good combustion in the combustion chamber:

- low-calorific "soft" wood (use wood as recommended in the manual);
- excessive moisture content of the wood used for burning (use wood with a moisture content of up to 20%);
- wood chopped too small, wood logs too thick:

Excessive sooting of the glass:

- low combustion intensity (burning with a very small flame; use only dry wood as fuel);
- using coniferous, resinous wood as fuel (use dry hardwood as specified in the room heater's operating manual).

Proper operation may be disrupted by atmospheric conditions (air humidity, fog, wind, atmospheric pressure), and sometimes by nearby tall structures.

In the event of recurring problems, an expert opinion should be requested from a chimney sweep company to confirm the cause of this condition and indicate the best solution to the problem.

9. PROCEDURE IN THE EVENT OF A CHIMNEY FLUE FIRE (SOOT IGNITION IN THE CHIMNEY)

To prevent soot ignition in the chimney, systematic cleaning of smoke flues must be ensured.

Chimney soot ignition is the burning of particles accumulated inside the chimney (flue gas) ducts, which accumulated during the operation of heating appliances and were not cleaned by chimney sweeps. In the event of a chimney fire:

- call the Fire Department by dialling the emergency number 998 or 112, providing detailed information on what is happening and how to reach the building;
- extinguish the fire in the heater by shutting off the supply of cold air to the combustion chamber;
- close tightly the heater door and the chimney cleanout doors, cutting off the air supply (due to lack of air, the fire may eventually die out);
- monitor the entire length of the chimney flue from inside the rooms at all times for cracks that could risk spreading the fire to the rooms;
- prepare extinguishing agents for possible use, e.g. fire extinguishers, a fire blanket, a hose connected to the water supply system, water in a container;
- make the rooms accessible and provide the necessary information to the arriving firefighters.

Pouring water into the chimney is strictly prohibited, as it risks bursting it.

It should be remembered that burning sparks or very hot flue gases, including dangerous, undetectable carbon monoxide, can escape through leaky ducts.

After a chimney soot fire, a chimney sweep must be called to clean the flues and inspect their technical condition.

10. DECOMMISSIONING AT THE END OF SERVICE LIFE

The room heater has been manufactured from environmentally neutral materials. After the appliance has been decommissioned and worn out, bolted parts should be dismantled by unscrewing them, and welded parts by cutting. The heater components are subject to standard waste collection, mainly as steel scrap. Safety and precautionary measures must be observed during appliance disassembly by using appropriate hand and power tools as well as personal protective equipment (gloves, work clothes, apron, goggles, etc.).

11. NOTES ON THE USE OF THE ROOM HEATER

It is essential to read and observe the following safety rules for the use of room heaters.

1. Room heaters may only be operated by adults who have read this operating manual and have been trained in its operation.
2. Children are not allowed near the appliance without adult supervision.
3. Flammable liquids must not be used to ignite the fuel; solid fuel should be used (e.g. camping firelighters), paper, etc.
4. Do not place flammable materials near the heater's glass or in its immediate vicinity.
5. It is forbidden to extinguish the fire in the combustion chamber with water.
6. Operation of the heater with cracked glass is prohibited.
7. Use fuel recommended by the manufacturer.
8. Never stand directly in front of the heater when opening the door. This poses a risk of burns.
9. When removing ash, flammable materials must not be closer than 1500 mm to the heater. Ash should be transferred to heat-resistant containers with a lid.
10. After the end of the heating season, the heater and the smoke flue must be thoroughly cleaned.
11. Pitted corrosion spots are acceptable, as they do not affect the proper operation of the appliance and do not reduce its functionality. They may occur as a result of improper storage of the appliances (e.g. in rooms with high humidity).
12. During operation, condensation of water vapour may occur – condensate.

PRODUCT FICHE

pursuant to Commission Regulation (EU) No 2015/1185

implementing Directive 2009/125/EC of the European Parliament and of the Council

Appliance parameters

Model identifier(s): **DEFRO HOME QUADROOM 2.0, DEFRO HOME QUADROOM PLS 2.0**

Indirect heating functionality: [~~yes~~/no]

Direct heat output: 9.0 (kW)

Indirect heat output: N/A (kW)

Fuel	Preferred fuel (only)	Other suitable fuel(s):	η_s [%]:	Space heating emissions at nominal heat output				Space heating emissions at minimum heat output			
				PM	OGC	CO	NO_x	PM	OGC	CO	NO_x
				mg/Nm³ (13% O_2)				mg/Nm³ (13% O_2)			
Wood logs with moisture content ≤ 25 %	yes	no	71	40	120	1500	200	n/a	n/a	n/a	n/a
Compressed wood with moisture content < 12 %	no	no									
Other woody biomass	no	no									
Non-woody biomass	no	no									
Anthracite and dry steam coal	no	no									
Hard coke	no	no									
Low temperature coke	no	no									
Bituminous coal	no	no									
Lignite briquettes	no	no									
Peat briquettes	no	no									
Blended fossil fuel briquettes	no	no									
Other fossil fuel	no	no									
Blended biomass and fossil fuel briquettes	no	no									
Other blend of biomass and solid fuel	no	no									

Characteristics when operating with the preferred fuel only

Parameter	Symbol	Value	Unit
Heat output			
Nominal thermal output	P_{nom}	9,0	kW
Minimum heat output (indicative)	P_{min}	-	kW
Auxiliary electricity consumption			
At nominal heat output	el_{max}	-	kW
At minimum heat output	el_{min}	-	kW
In standby mode	el_{SB}	-	kW
Permanent pilot flame power requirement			
Pilot flame power requirement (if applicable)	P_{pilot}		kW

Parameter	Symbol	Value	Unit
Useful efficiency (NCV as received)			
Useful efficiency at nominal heat output	$\eta_{th,nom}$	80,7	%
Useful efficiency at minimum heat output (indicative)	$\eta_{th,min}$	-	%

Type of heat output/room temperature control (select one)

single stage heat output, no room temperature control	yes/~~no~~
two or more manual stages, no room temperature control	~~yes~~/no
with mechanic thermostat room temperature control	~~yes~~/no
with electronic room temperature control	~~yes~~/no
with electronic room temperature control plus day timer	~~yes~~/no
with electronic room temperature control plus week timer	~~yes~~/no

Other control options (multiple selections possible)

room temperature control, with presence detection	~~yes~~/no
room temperature control, with open window detection	~~yes~~/no
with distance control option	~~yes~~/no

Name and address of the manufacturer or their authorised representative:

DEFRO R. Dziubeła spółka komandytowa

St. Powiatowa 111A, 26-067 Ruda Strawczyńska

Robert Dziubeła – General Partner

PRODUCT FICHE

pursuant to Commission Regulation (EU) No 2015/1185

implementing Directive 2009/125/EC of the European Parliament and of the Council

Appliance parameters

Model identifier(s): **DEFRO HOME QUADROOM LONG, DEFRO HOME QUADROOM LONG (SOLID)**

Indirect heating functionality: [~~yes~~/no]

Direct heat output: 8.0 (kW)

Indirect heat output: N/A (kW)

Fuel	Preferred fuel (only	Other suitable fuel(s):	η_s [%]:	Space heating emissions at nominal heat output				Space heating emissions at minimum heat output			
				PM	OGC	CO	NO_x	PM	OGC	CO	NO_x
				mg/Nm³ (13% O_2)				mg/Nm³ (13% O_2)			
Wood logs with moisture content ≤ 25 %	yes	no	71	40	120	1500	200	n/a	n/a	n/a	n/a
Compressed wood with moisture content < 12 %	no	no									
Other woody biomass	no	no									
Non-woody biomass	no	no									
Anthracite and dry steam coal	no	no									
Hard coke	no	no									
Low temperature coke	no	no									
Bituminous coal	no	no									
Lignite briquettes	no	no									
Peat briquettes	no	no									
Blended fossil fuel briquettes	no	no									
Other fossil fuel	no	no									
Blended biomass and fossil fuel briquettes	no	no									
Other blend of biomass and solid fuel	no	no									

Characteristics when operating with the preferred fuel only

Parameter	Symbol	Value	Unit
Heat output			
Nominal thermal output	P_{nom}	8,0	kW
Minimum heat output (indicative)	P_{min}	-	kW
Auxiliary electricity consumption			
At nominal heat output	el_{max}	-	kW
At minimum heat output	el_{min}	-	kW
In standby mode	el_{SB}	-	kW
Permanent pilot flame power requirement			
Pilot flame power requirement (if applicable)	P_{pilot}		kW

Parameter	Symbol	Value	Unit
Useful efficiency (NCV as received)			
Useful efficiency at nominal heat output	$\eta_{th,nom}$	81,3	%
Useful efficiency at minimum heat output (indicative)	$\eta_{th,min}$	-	%

Type of heat output/room temperature control (select one)

single stage heat output, no room temperature control	yes/~~no~~
two or more manual stages, no room temperature control	~~yes~~/no
with mechanic thermostat room temperature control	~~yes~~/no
with electronic room temperature control	~~yes~~/no
with electronic room temperature control plus day timer	~~yes~~/no
with electronic room temperature control plus week timer	~~yes~~/no

Other control options (multiple selections possible)

room temperature control, with presence detection	~~yes~~/no
room temperature control, with open window detection	~~yes~~/no
with distance control option	~~yes~~/no

Name and address of the manufacturer or their authorised representative:

DEFRO R. Dziubeła spółka komandytowa
St. Powiatowa 111A, 26-067 Ruda Strawczyńska

Robert Dziubeła – General Partner

PRODUCT FICHE

pursuant to Commission Regulation (EU) No 2015/1186
and Regulation (EU) 2017/1369 of the European Parliament and of the Council

Supplier's name and address:

DEFRO R. Dziubeła spółka komandytowa
St. Powiatowa 111A
26-067 Ruda Strawczyńska

Appliance parameters

Supplier's model identifier	**DEFRO HOME QUADROOM 2.0** **DEFRO HOME QUADROOM PLS 2.0**	**DEFRO HOME QUADROOM LONG** **DEFRO HOME QUADROOM LONG (SOLID)**
Energy efficiency class	**A+**	**A+**
Direct heat output of the product	9.0 kW	8.0 kW
Indirect heat output	N/A	N/A
Energy efficiency index	107	108
Useful efficiency at nominal heat output	80,7 %	81,3 %
Useful efficiency at minimum load	N/A	N/A
Special precautions	Each time prior to installation, commissioning, or maintenance of the device, the instructions contained in the User Manual provided by the manufacturer must be observed	

Edition 2

DEFRO R. Dziubeła limited partnership

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