

The logo for DEFRO HOME, featuring the brand name in a bold, white, sans-serif font. The word 'DEFRO' is on the top line and 'HOME' is on the bottom line. The background of the logo area is a dark grey band with a geometric, low-poly pattern in various shades of grey.

DEFRO
HOME

operating manual

dry stove

DEFRO HOME CUBE series

**DEKLARACJA ZGODNOŚCI WE
DECLARATION OF CONFORMITY EC**

nr 57/R-2/01/2017

DEFRO Spółka z ograniczoną odpowiedzialnością Spółka komandytowa

00-403 Warszawa, ul. Solec 24/253
Manufacturing plant:
26-067 Strawczyn, Ruda Strawczyńska 103A

DEKLARUJE / DECLARES

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

**Piec kominkowy wolnostojący z ręcznym zasypem paliwa/ Dry Stove with Fuel Charge
DEFRO HOME CUBE 10 kW**

(typ/type DEFRO HOME CUBE)

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

został

**Rozporządzenie Parlamentu Europejskiego / Regulation of the European Parliament 305/2011
Rozporządzenie Komisji (UE) / Commission Regulation (EU) 2015/1185**

i niżej wymienionymi normami zharmonizowanymi:

and that the following relevant Standards:

PN-EN 13240:2008

dokumentacja techniczna / technical documentation

Wyrób oznaczono znakiem:

Product has been marked:



Ta deklaracja zgodności traci swą ważność, jeżeli w piecu wolnostojącym DEFRO HOME CUBE wprowadzono zmiany, został przebudowany bez naszej zgody lub jest użytkowana niezgodnie z instrukcją obsługi. Niniejsza deklaracja musi być przekazana wraz z piecem wolnostojącym w przypadku odstąpienia własności innej osobie.

This Declaration of Conformity becomes invalid if any changes have been made to the DEFRO HOME CUBE Dry Stove, if its construction has been changed without our permission or if the dry stove 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 dry stove.

**Piec wolnostojący DEFRO HOME CUBE jest wykonywany zgodnie z dokumentacją techniczną przechowywaną przez:
DEFRO HOME CUBE Dry Stove has been manufactured according to technical documentation kept by:
DEFRO Spółka z ograniczoną odpowiedzialnością Sp. k., Production plant: 26-067 Strawczyn, Ruda Strawczyńska 103a.**

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

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

Dwie ostatnie cyfry roku, w którym oznakowanie zostało naniesione: 17
Two last digits of the year of marking: 17

Warszawa, 03.07.2017
miejsce i data wystawienia
place and date of issue.

Robert Dziubeła
prezes zarządu / CEO

Dear Customer,

We would like to inform you that we make every efforts to offer products of quality fulfilling the most restrictive standards and warranting operational safety. All devices are produced in accordance with the requirements of relevant EU directives and have CE safety mark confirmed by the Declaration of Conformity EC.



We appreciate all your comments and proposals regarding our level of service. We appreciate your comments and proposals regarding our devices and the level of service provided by our Partners and Technical Support/Service.

DEFRO Sp. z o.o. Sp. K

Dear Customer,

We would like to thank you for choosing the high quality DEFRO product, which will ensure your safety and operational reliability.

As our customers, you can always count on help of the DEFRO Service Centre, which is ready to ensure continuous efficiency of your boiler.


Please note that in order to use the dry stove safely and efficiently, it is crucial to get familiar with the following directions.


- Get familiar with this Operating Manual - useful remarks concerning proper operation of the dry stove can be found there.
- Determine if all parts have been delivered or the dry stove was not damaged during transport.
- Check data on the rating plate against the warranty card.
- Prior to starting the dry stove, check flue connection against connection recommendations included in this manual and appropriate national regulations.

Basic dry stove usage rules are to be obeyed while using the dry stove. Do not open the doors during operation of the device.

DEFRO Service Centre or Authorized DEFRO Service should be always contacted when any intervention is necessary because only these parties have original spare parts and are properly trained within the scope of installation and operation of DEFRO boilers.

For your safety and boiler use convenience please get acquainted with this operating manual and send back correctly filled copy of the Warranty Card to the following address:

 DEFRO Sp. z o.o. Sp. k. - Centrum Serwisowe
Ruda Strawczyńska 103a
26-067 Strawczyn

 fax 0048 41 303 91 31

 serwis@defro.pl

By sending back your Warranty Card, you will be registered in our DEFRO heating boilers users database and we will be able to provide you quick and professional technical support.

If you do not send back a correctly filled in Warranty Card and the dry stove quality and completeness receipt within the period of up to two weeks after the date of installation but no longer than within six months, after purchasing, the **warranty will become invalid**. This results in delays with repairs and the necessity of **covering costs** of service and travelling expenses.

Thank you for understanding.
Yours sincerely,

DEFRO Sp. z o.o. Sp. k.

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1. INFORMATION

Operating manual is an integral and essential part of the product and must be forwarded to the user also in case when the property is transmitted. User should carefully read the manual and save it for the future because all remarks included there are important guidelines concerning safety during installation, usage and maintenance.

Installation of dry stove must be carried out in accordance with the mandatory standards in country of destination, according to guidelines of the manufacturer and by qualified personnel. Improper installation of the device can be a reason for personal injuries and damage to property for which the manufacturer is not liable.

Dry stove can be used only for the purpose it was explicitly intended. Any other use should be treated as inappropriate and in consequence as dangerous.

In case of error during installation, usage or maintenance works caused by non-observance of the legislation, regulations in force or instructions contained in this manual (or others, delivered by the manufacturer) the manufacturer rejects any contractual or non-contractual liability for resulting damages and the warranty for the device becomes void.

Versions of publications

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

Content of this Operating Manual is a property of DEFRO. Any copying, duplicating, publishing of content of this User's Manual without prior written consent of DEFRO is forbidden.

Manual storage and browsing its contents

We recommend to take care about this manual and store it in easily and quickly available location. If this manual has been lost, damaged or destroyed you should request a copy in the sales outlet or directly from the Manufacturer providing identification data of the product. All the most important information included in the operating manual are marked with "bold" and have symbols pointing out user's attention to hazards which can be present during operation of the dry stove. Symbols used in the text are explained below:



Danger!

Direct threat to life and health! Non-compliance with the recommendations marked in this way and misuse may result in death or major injuries.



Danger!

Danger from electrical voltage! Incorrect installation and incorrect electrical connections may cause danger to life by electric shock.



Note!

Warning symbol indicating that you should read carefully and understand the given information, to which it relates. Non-compliance with these recommendations may result in major damage of the equipment and create a hazard for the user or the environment.



Danger!

Direct threat to health! Non-compliance with the recommendations distinguished in this way may cause a fire or burns.




Hint!

Informative symbol. Useful information and hints are marked in this way.

2. BASIC SAFETY RULES

2.1. SAFETY WARNINGS



- The national and local provisions should be met.
 - Equipment should be installed in compliance with the legal standards applicable in the given location, region or country.
 - The equipment should not be used by a persons (including children) of impaired physical, sensory, mental capabilities and by persons without experience and required knowledge provided that such operation is not carried out under their supervision or after proper instruction by a person responsible for their safety.
 - You should always observe the guidelines given in the operating manual to ensure correct use of the equipment and to prevent accidents.
 - Operation and adjustment should be carried out by adults. Errors and incorrect setting can cause hazardous situations and/or incorrect operation.
 - Prior to any operations the user (or any person operating the equipment) should read and understand whole contents of this manual.
 - Equipment should be used only as intended. Each other use is considered as misuse and hazardous as a consequence.
 - The equipment should not be used as a ladder or object to lean against.
 - Prior to installation you should make sure that the substrate will resist force of the equipment considering its weight.
 - In case of disturbances in operation the equipment can be restarted only when the occurred problem has been removed and the equipment is brought back to original condition.
 - The user is fully responsible for misuse of the product and relieves DEFRO from any civil and criminal liability.
 - All types of modifications or replacement of equipment parts with non-original components or without authorization may present a risk for operator and relieves DEFRO from any civil and criminal liability.
 - Incorrect installation or maintenance (incompatible with contents of this manual), can cause injuries of people, animals or property damage. Then DEFRO shall be relieved of any civil or criminal liability.
- 
- Part of equipment surface is very hot (doors, handle, window panel, flue gas discharge pipe, etc.). You should avoid direct contact with such components without suitable protective clothing or protective equipment such as e.g. heat resistant gloves.
 - Do not touch the window panel after heating up of the equipment.
 - Keep children away from the equipment when it is operating because each hot surface can cause burns.
 - It is forbidden to start-up the equipment when the doors are opened or the window panel is cracked.
 - Do not place and dry the underwear on the equipment. Possible dryers for hanging underwear or similar should be located at an adequate distance from the equipment - fire hazard.
 - It is absolutely forbidden to open the doors if the flue is on fire. Then call the appropriate services.
 - It is recommended to keep a distance min. 400 mm between hot parts of the equipment and medium inflammable materials; otherwise use commercially available insulation materials. Apply this hint also for furniture, curtains etc. Minimum distances are given in point 5.2 of the operating manual.

- It is absolutely forbidden to use flammable liquid for equipment firing up.
- If the substrate, on which the equipment is located, is made of inflammable materials, such as parquet or floor lining then you should place protective plate under it (the plate should protrude 250-300 mm from front of the equipment).

2.2. WARNINGS RELATED TO OPERATION



- Equipment should be shutdown in case of failure or incorrect operation.
- Fuel used in the equipment should meet the conditions described in this manual.
- Internal parts of the equipment should not be washed with water.
- Do not allow contact with water and, above all, do not wash any varnished coatings before curing. The coating of new devices is not an anti-corrosive coating, heat-resistant paint only gains its protective properties after curing under the influence of heat (after several ignitions).
- Do not expose the body to action of hot air for a long period of time. Do not heat excessively the room where you are staying and where the equipment is installed. It may have adverse impact on physical condition and be a reason of health problems.
- Equipment should be installed in rooms with fire protection and equipped with all required components such as supply (with air) and flue gas discharge.
- Equipment and cladding made of ceramics should be stored in rooms free from moisture and they cannot be exposed to adverse effects of the weather.
- It is not recommended to place body of the equipment directly on the floor and if such floor is made of inflammable materials it should be properly insulated.
- To facilitate possible interventions by the technical personnel you should not place the equipment inside the closed rooms and just by the walls what can also disturb air intake.
- Always make sure and check whether doors of the combustion chamber are tightly closed when the equipment is operating.
- Equipment consumes exact amount of air which is required for combustion process; it is recommended to connect the equipment for air intake from outside using suitable pipe and through special outlet located at the back of the equipment.

ADDITIONAL INFORMATION



- In case of any problems you should contact sales outlet or qualified personnel authorized by DEFRO. Request original spare parts if the repair is necessary.
- Use only fuel with properties compatible with the recommendations of this operating manual.
- Check and clean flue gas discharge ducts (connecting piece to flue) periodically.
- Store this manual carefully because it should be available for a whole period of equipment operation. In case of sale of giving the equipment to the other user you should always make sure whether the product has the manual enclosed.
- Request new copy from authorized sales outlet in DEFRO company if it has been lost.

3. INTENDED USE

Dry stoves are intended for combustion of wood from deciduous trees. They are intended for heating of houses and spaces where they

are installed. They can be also used as an additional source of thermal power.

Dry stove can be connected multiple times.

4. TECHNICAL SPECIFICATION

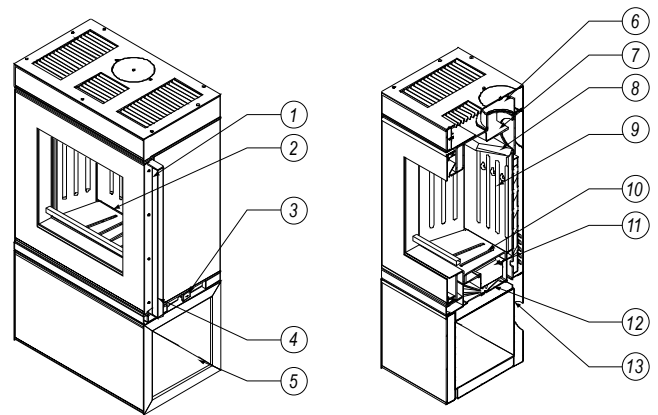
4.1. DESIGN

Dry stove operates as a heater for a room in which it is installed. Hot air is emitted directly from the furnace through the window panel and on by radiation through convection holes in the upper wall of the device.

Body of the dry stove - walls in contact with fire - is made of galvanized steel sheet and furnace chamber is lined with ceramic cladding. Body is lined with panels made of steel sheet covered with powder paint.

Air for combustion process is supplied through the air inlet (intake) socket located at the rear of equipment.

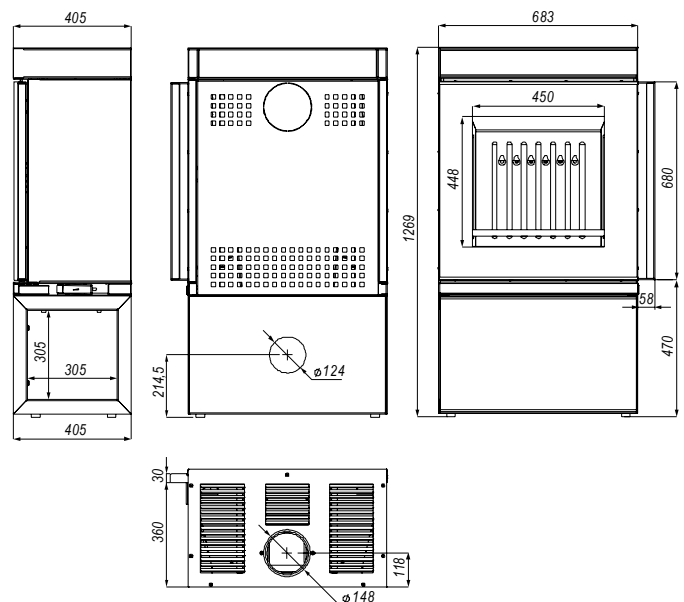
Socket for flue gas discharge is located in the upper wall of the furnace. Flue gases are removed to the chimney through a flue located in the upper wall of the dry stove.



Picture 1. DEFRO HOME CUBE dry stove design.

1 – doors with steel handle, 2 – furnace window panel, 3 – air supply slider, 4 – doors release handle, 5 – box for wood storage, 6 – flue Φ 148 mm, 7 – steel deflector, 8 – deflector made of vermiculite, 9 – cladding of furnace chamber, 10 – grate, 11 – drawer for ash, 12 – adjustment of air inflow, 13 – air intake Φ 124 mm.

4.2. TECHNICAL DATA



Picture 2. DEFRO HOME CUBE dry stove dimensions.

Table 1. DEFRO HOME CUBE dry stove technical data.

Specification / device type	Unit	DEFRO HOME CUBE
Nominal power	kW	10
Heating power range	kW	no data
Flue size	mm	148
Single fuel charging	kg	~3.5
Efficiency	%	70.1
Seasonal energy efficiency	%	60.1
CO emission for 13% O ₂	% mg/m ³	0.09 1173
Flue gases temperature	°C	357
Weight ¹⁾	kg	230±20
Flue gas stream for nominal power	g/s	no data
Minimum draught at rated power	Pa	no data
Fuel type	dry hardwood tree (max. 20% of moisture content)	
Type of heater	of periodic combustion	

¹⁾ Device weight depends on the selected design version and its equipment.

4.3. EQUIPMENT

The dry stove is delivered on a pallet, foil-wrapped and is fully assembled. The scope of delivery can include additional components and subassemblies, according to the order of the user. Components which are standard equipment are specified in table 2.

Table 2. Dry stove equipment.

Standard equipment of dry stove	Unit	Quantity
Dry stove user's manual	pcs.	1
The ceramic lining of the furnace chamber	set	1

4.4. FUEL PARAMETERS

The dry stove is intended for combustion of wood from deciduous trees (oak, hornbeam, ash, beech) with a moisture content below 20% (wood seasoned in proper conditions for at least 2 years). The maximum length of chunks of wood is 300 mm.

It is not allowed to use wet wood (extensive contamination of fireplace and soot emission and a decrease of furnace energy efficiency).

It is forbidden to use all other fuels, min. coal, softwood from coniferous trees, wood from tropical trees and any liquid fuels.

It is forbidden to combust all types of litter and wood wastes. Firing with inadmissible materials in the fireplace may result in damage to the fireplace and life and health hazard for the users (toxic flue gas from chemicals).



Use of bad quality fuel or incompatible with the above-mentioned recommendations would cause irregularities in the operation of the equipment and can lead to loss of warranty and decline of the liability for the product.

The dry stove is not a furnace intended for combustion of wastes and forbidden fuels cannot be combusted in it.

Wood should be seasoned minimum two years. Firing with wet wood, with low calorific value, decreases the efficiency and has an adverse influence on dry stove lifetime.

It is not recommended to use softwood and resinous woods as a fuel. It causes intensive smoke concentration and the necessity to clean the equipment and flue more often.

It is forbidden to combust coal, wood from tropical trees, chemical products, liquid fuels etc., e.g. oil, alcohol, petrol, naphthalene, laminated, impregnated boards etc., paper, cardboards, old clothes, wastes.

DEFRO Sp. z o.o. Sp. k. does not accept liability for damage caused or improper burning of fuel if the fuel used is prohibited.

4.5. SPARE PARTS

To obtain information on the availability of spare parts for dry stove or inquiries about equipment servicing please contact with DEFRO Service Center or Authorized DEFRO Service.

	DEFRO Sp. z o.o. Sp. k. Service Centre Ruda Strawczyńska 103a 26-067 Strawczyn		fax 0048 41 303 91 31

5. TRANSPORT AND INSTALLATION

5.1. TRANSPORT AND STORAGE

The dry stove is delivered on a pallet, foil-wrapped and is fully assembled. It is recommended to transport dry stove, in such packing condition, as close as a possible target location for installation, what will minimize the possibility of damage of device housing.

All remaining parts of the packing should be removed in such a way that it will not pose any hazard for people and animals.

Appropriate lifts are to be used for lifting and lowering the dry stove. For transport, the dry stove is to be secured against moving and tilting on a vehicle's platform by means of belts, wedges and wooden blocks.



The dry stove is to be transported in a vertical position!

The dry stove is to be stored in a non-heated room, under a roof and with efficient ventilation. Prior to installation it is to be determined if all parts have been delivered and if they are in good technical condition.

5.2. WORKING ENVIRONMENT

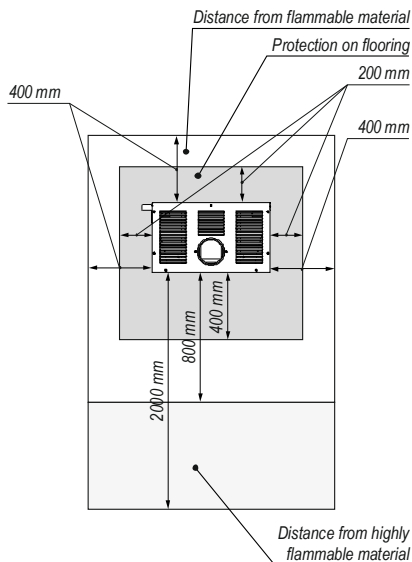


The dry stove should be installed in compliance with the requirements of the currently applicable standards and legal regulations and detailed regulations of the target country. In Poland these conditions are regulated by the Regulation of the Minister of Infrastructure of 12 April 2002 on technical conditions which should be fulfilled by buildings and its location. (Journal of Laws no. 75 of 2002 item 690 as amended) and Polish Standard PN-13240:2008 Room heaters fired by solid fuel. Requirements and tests.

The dry stove should be installed in a suitable location allowing opening of the doors and carrying out regular maintenance works. The environment should be:

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

Correct setting of the stove is necessary to obtain the satisfactory heating level of the residential unit. Prior to assembly it is necessary to select a suitable position for stove installation. Check minimum safe distances from materials susceptible to heat or inflammable materials such as load-bearing walls and other walls or wooden components, furniture etc.



Picture 3. Minimum safe distances during setting of dry stove.

Installation of the dry stove should observe the following safety rules:

- minimum distance 400 mm from side and rear of the medium inflammable materials,
- minimum distance 800 mm from the front wall, where the medium inflammable materials cannot be located.
- objects made of highly inflammable materials should be located in distance minimum 2000 mm from the furnace

If it is not possible to maintain the above indicated distances then you should apply process and building measures to avoid fire hazards. In case of contact with wooden wall or wall made of other inflammable material it is appropriate to insulate flue gas discharge pipe.



In the case of the floor made of inflammable materials it is appropriate to prepare a plane protecting the floor and execute protection in accordance with the standards applicable in the given country.

The dry stove should be located on a substrate with suitable load-bearing capacity. In accordance with the Polish Standards each square meter of the floor slab in the single-family building should transfer a load of 150 kg. If this condition is fulfilled the dry stove manufactured by DEFRO can be installed without needing to reinforce the floor slab.

Nonetheless, if you are not sure about the design of floor slab, where the stove is to be installed, you should absolutely contact with building designer to reinforce the floor slab or execute special structure distributing the weight on a larger area.



Flooring in the room, where the stove is to be installed, should be properly dimensioned, to maintain the load.

To ensure correct operation of dry stove you should ensure suitable inflow of air required for combustion (it is appropriate to ensure approx. 40 m³/h) in accordance with the installation standards and standards applicable in the given country. The volume of the surrounding environment should not be less than 30 m³. You should assume that combustion of 1 kg of wood requires ~8 m³ of air.

Air should be supplied through fixed openings of minimum 100 cm² cross section made in the walls (near the stove) and directed to outside. This opening should be made in a way ensuring that they cannot be plugged.

Air can be supplied from adjacent rooms, provided that they are equipped with external air supply and they are not intended for a bedroom and bathroom, and where fire hazard is not present, for example: garages, woodsheds, inflammable materials storage. You should absolutely observe recommendations of the applicable standards.

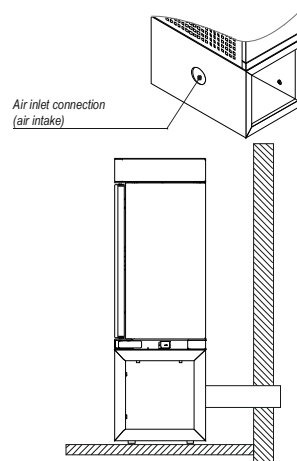


It is forbidden to install a dry stove in bedrooms, bathrooms and other rooms where other heating equipment without independent air inflow are installed (fireplace, stove, etc.).

It is also forbidden to set dry stove in explosive atmospheres.

5.3. CONNECTION TO EXTERNAL AIR INTAKE

Room, where the dry stove is installed, should be equipped with an inflow of air in the minimum amount required for correct combustion process and for room ventilation. This can be done by executing fixed vents in the wall directed to the outside or through independent or common ventilation ducts.



Picture 4. Connection of the dry stove DEFRO HOME CUBE to external air intake.

The external wall near the stove should have through the opening with free cross-section 100 cm² (opening with 12 cm in diameter or square 10 x 10 cm), protected with grille on the internal and external side, for this purpose. Furthermore, the air intake should be:

- directly connected with the room, where the dry stove is to be installed,
- protected with grille, metal net or suitable cover not restricting minimum cross-section,
- located in a way preventing plugging it,
- located with consideration of proper distances preventing swirling of air (e.g. with respect to the windows).

5.4. INSTALLATION TO FLUE

The dry stove should be connected to the individual flue. Size of chimney draught should equal:

- minimum draught - 6 ± 1 Pa,
- average, recommended draught - 12 ± 2 Pa,
- maximum draught - 15 ± 2 Pa.

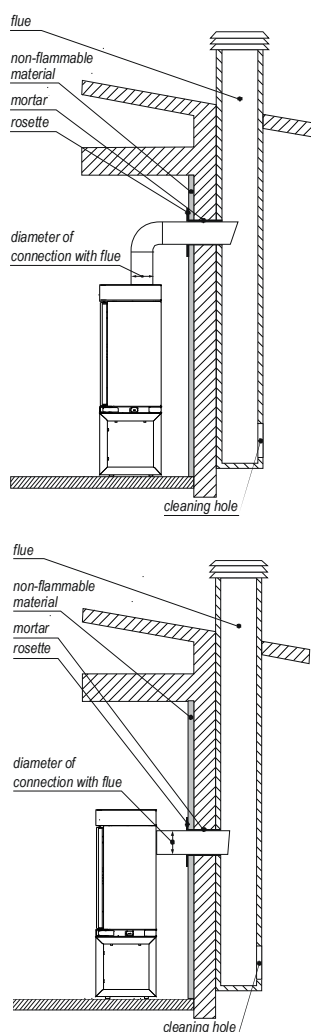
During execution of opening for flue gas discharge pipe you should consider the possible occurrence of inflammable materials. If the opening will pass through the wooden wall or wall made of material sensitive to heat then you should obligatory maintain minimum distance from flammable material (value given on the certification label of the pipe), with possible additional insulation using proper materials (thickness 1.3 - 5 cm, heat conductivity min. 0.07 W/m °K).

As an alternative it is recommended to use an insulated industrial pipe, which can be also used outdoors, to avoid the occurrence of condensate.

For correct operation connector between the dry stove and flue or smoke duct should be executed acc. to the below recommendations:

- horizontal sections should have a minimum slope 3% towards the top,

- length of the horizontal section should be minimum and should not exceed 2/3 metre,
- a number of changes of directions, inclusive of use of the "T" component, should not exceed 4.



Picture 5. Option to connect dry stove to flue.

Chimney or individual smoke duct should meet the following requirements:

- be resistant to combustion products, water-proof and suitably insulated, in compliance with conditions of use,
- be made of materials resistant to normal mechanical stresses, heat, the action of combustion products and possible condensate,
- be vertical with a change of axis direction not exceeding 45°,
- be adequately separated with void space or suitable insulation from combusted and inflammable materials,
- have preferably circular internal cross-section: square or rectangular cross-section should have rounded corners with a radius not smaller than 20 mm,
- internal cross-section should be constant, free and independent,
- have a rectangular cross-section with the maximum ratio between two sides equal to 1.5.



It is forbidden to use mechanical exhaust ventilation. The dry stove should not be used if the chimney draught is too low.

The stove offers two locations of flue gas outlet socket: on top or rear wall of the stove. The stove is delivered from a factory with a socket installed in the top wall. Change of its location is described in chapter 7.3.4

6. USAGE AND OPERATION

6.1. INTRODUCTORY REMARKS



Do not touch stove during first firing-up, because the paint is hardening during this stage.

Touching the paint could result in uncovering of steel surface.

It is possible to refresh it using spray paint of the same colour if necessary.



It is good practice to ensure efficient ventilation during first firing-up because a small amount of smoke and paint odour will be emitted from the stove.

Do not stay near the stove. It is required to vent the room. Smoke and paint odour will disappear after approx. one hour of operation. However, we remind that they are not harmful to health.

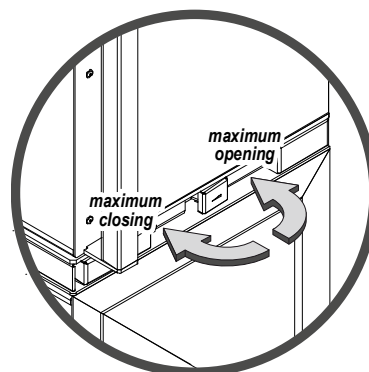
The furnace is subject to expansion and shrinkage during warming and cooling down stage what may cause slight squeaks. This is an absolutely normal phenomenon because a structure of the equipment is made rolled steel and this phenomenon shall not be considered as a defect.

It is very important to avoid excessive overheating of the stove at the beginning but to reach the required temperature gradually. Use low heating powers. During the next firing-up of the stove it will be possible to use whole available thermal power. This will avoid damage of ceramic tiles, welds and steel structure.



Do not expect immediate effects of heating!

6.2. FIRST START-UP AND OPERATION

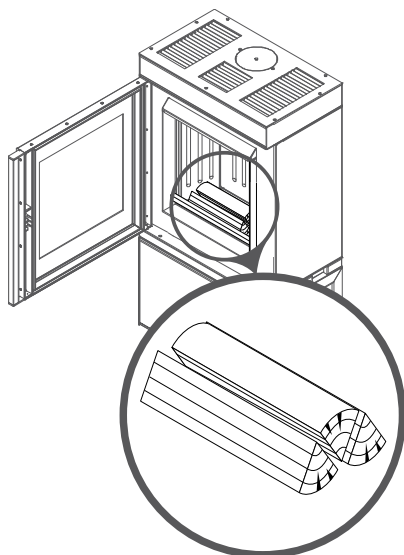


Picture 6. Setting of slider for air inflow adjustment

Set slide of a damper for maximum opening (picture 6). Charge approx. 1 kg of dry hardwood and fire it up. The odour of paint from the body will be released during the first several hours of combustion. This is completely normal. You should strongly vent the room at that time. Check tightness of joints once again when fuel is completely burned out and equipment has been cooled down.

Empty the ash drawer prior to each successive start-up of the equipment. Remove grate, then ash drawer using handles, and remove the remaining dust. Window panel should also be cleaned. Do not use sharp materials. It will damage the surface of the window panel and screen printing.

Do not fill the furnace completely with wood. The charge should not exceed 1/3 of the volume of the combustion chamber. To obtain optimum operating parameters of the equipment you should make a single charge in an amount approximately equal to the single charge given in table 1. Method of fuel laying is shown on figure 7



Picture 7. Method of fuel arrangement during firing up.

You should use only hardwood (recommended beech, oak, hornbeam) of low moisture content (below 20%). During combustion the doors should be opened only when the fuel is being added. Prior to adding the wood you should wait until flames fall down and charge is completely burnt out leaving a layer of glow facilitating firing up. After firing up refill combustion chamber with wood, placing fuel in a way that reasonably fills the combustion chamber for the combustion period expected by the user based on personal experience. Combustion intensity should be adjusted with the air controller located on side of the equipment.



Housing components will be very hot during operation. You must exercise caution.

6.3. DAMPING

Damping is executed by the closing inflow of primary air. In such case you should wait until the fuel completely burns out in a natural way.

If it is necessary to quickly damp a flame you should charge furnace chamber with dry sand or ash. It is not allowed to damp a flame by pouring it with water because it may damage components of the equipment.



After a longer break in equipment's operation you should check flow capacity of the flue.

7. CLEANING AND MAINTENANCE



All operations related to cleaning of all components should be carried out when the stove is completely cold. It is required to use protective gloves.



It is a good practice to ensure good ventilation of the room during cleaning of the fireplace.

7.1. BASIC OPERATIONS AND CLEANING BY THE USER.

Any service and maintenance works are to be carried out with meticulous care and only by adults familiarized with this manual. The dry stove should not be cleaned in the presence of children.



Any service and maintenance works are to be carried out with meticulous care and only by adults familiarized

with this manual. The dry stove should not be cleaned in the presence of children.

7.1.1. CLEANING BEFORE EACH STARTING

Prior to every successive start-up of the equipment the ash container should be cleaned and emptied, handling the ash with due care. Remove grate, then ash container using handles, and remove the remaining dust. Dust can be removed using vacuum cleaner only if it is completely cold. Use vacuum cleaner adapted to remove the particles of a specified size for this purpose.

Re-install the ash container below the grate after the cleaning, making sure that its position is correct.

7.1.2. WINDOW PANEL CLEANING

It is recommended use a dry brush to clean the ceramic glass. If the contamination is significant use suitable cleaning agent spray and spray little amount and then clean the window panel with a cloth.



Do not use abrasive products and do not spray the product for window panel cleaning on painted parts and gaskets of fireproof doors (cord made of ceramic fiber).



Do not open doors to clean the window panel during operation of the fireplace. Cleaning of window panel is possible only when the equipment is cold.

7.1.3. DOORS/GASKETS

Abrasive surfaces of doors and closing mechanism should be occasionally lubricated with graphite grease. Carry out inspection and cleaning of the whole stove prior to each heating season. Pay special attention to the condition of gaskets, replace them if necessary.

7.1.4. FURNACE CHAMBER

Clean furnace chamber of the stove periodically, depending on moisture content and type of wood used.

7.1.5. FLUE

In compliance with applicable regulations you should clean the flue two times a year. The flue should be cleaned by a chimneysweep company and this fact should be documented in this manual.



Flue gases coming out of blocked chimney are dangerous. Chimney and connector should be kept clean. They should be cleaned before each heating season.



After a longer break in equipment's operation you should check flow capacity of the flue.

7.2. PERIODIC INSPECTION BY AUTHORIZED SERVICE

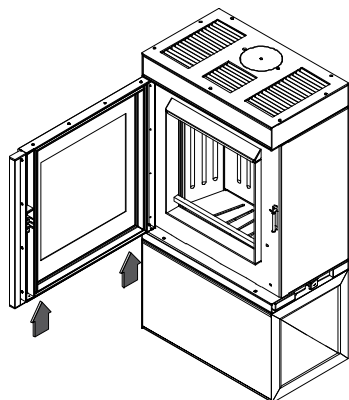
After the heating season it is necessary to clean the chamber through which flue gas is flowing. This cleaning is obligatory and is intended to remove all combustion residues.



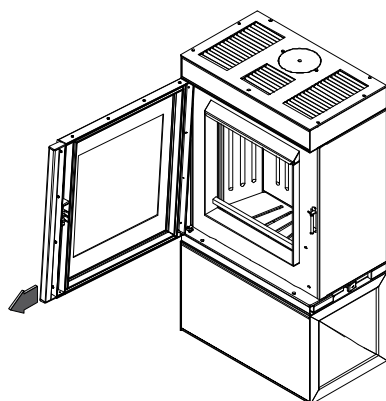
Periodic inspection of the equipment should be carried out only by a qualified manufacturer's service.

7.3. DISMANTLING OF COMPONENTS

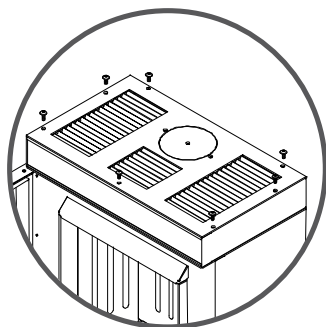
7.3.1. DOORS DISASSEMBLY



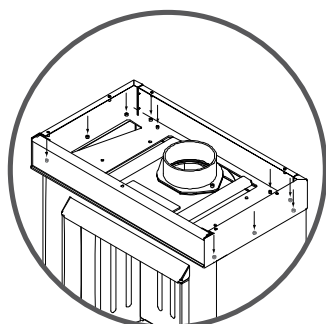
1. Open the doors and lift them into maximum upwards position to remove bottom pin of the hinge from a sleeve.



2. Slide bottom edge of the doors to outside to position pin of the hinge outside the sleeve. Remove doors in such position.



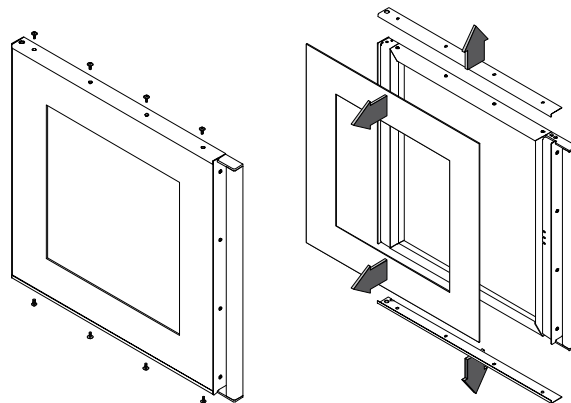
3. If it is impossible to remove hinge pin from the sleeve due to too small clearance over the doors then you should remove the top cover of the furnace undoing screws indicated on the above drawing.



4. Then loosen screws fixing the upper wall of the stove, which is locking the doors from the top. Repeat the operations described in point 1 and 2 using the additional clearance.

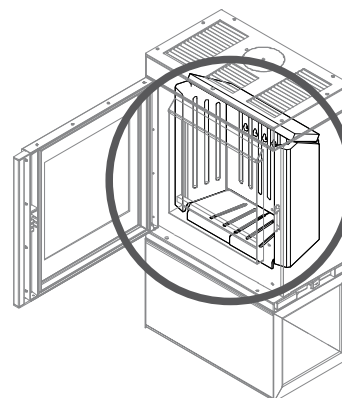
7.3.2. WINDOW PANEL DISMANTLING

It is possible to disassemble the window panel after the doors have been disassembled. The best way is to disassemble the window panel when the doors are in horizontal position (e.g. when such doors lie on the table).

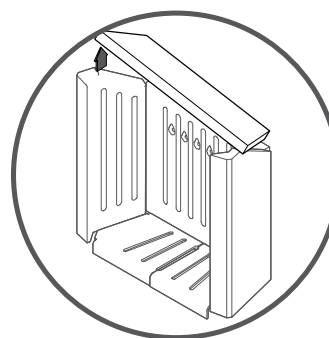


Picture 8. Window panel dismantling from doors.

7.3.3. DISASSEMBLY OF FURNACE CLADDINGS

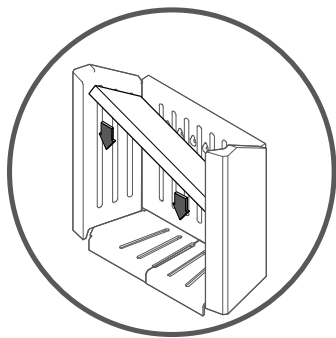


1. Open the doors. First, you should disassemble the deflector.

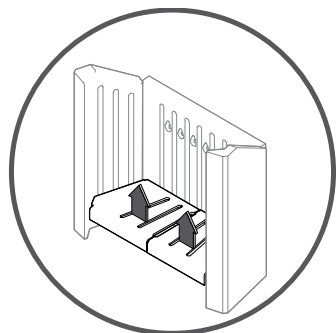


2. Lift one side of deflector and then lift the whole deflector upwards in such a position. Slide it slightly to the left or right to place it in free space between the side panels.

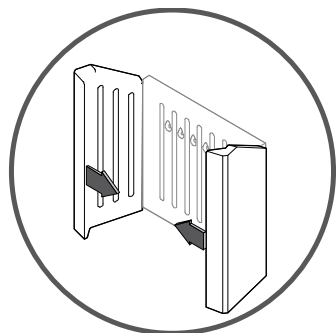
7.3.4. CHANGE OF POSITION OF FLUE GAS OUTLET SOCKET



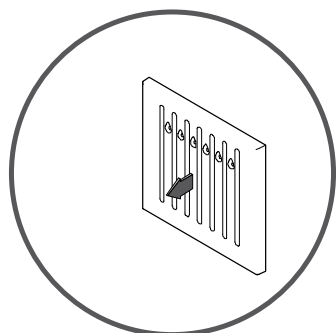
3. Lower the deflector in such position and remove through the doors opening.



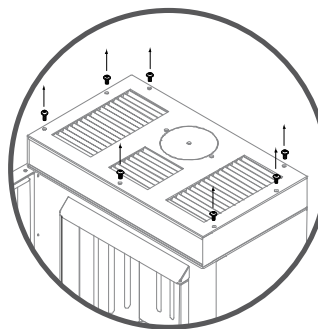
4. Lift and remove both parts of the grate.



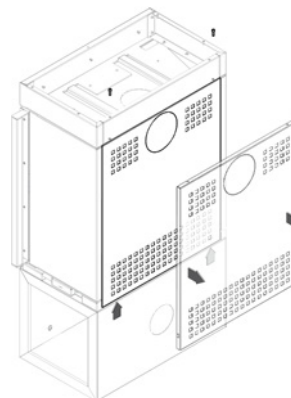
5. Remove both side plates



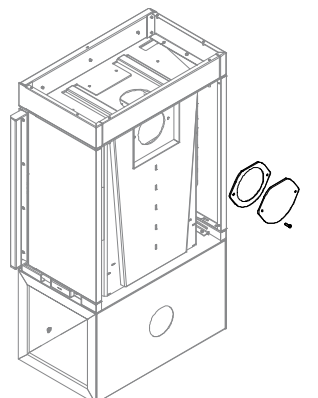
6. At last, remove the plate located on the rear wall.



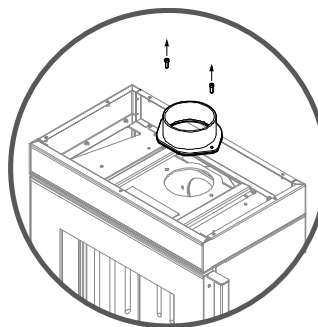
1. Unscrew fixing bolts and remove the top cover of the stove.



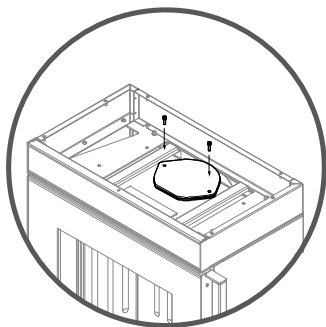
2. Remove the screws fixing rear cover of the stove. Lift the cover to the top and slide out with horizontal movement to outside.



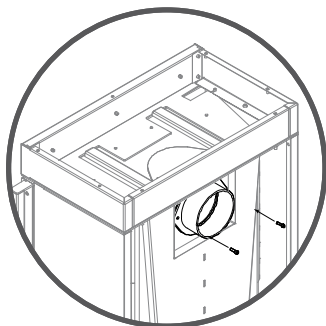
3. Unscrew plug of flue gas socket located on the rear wall. Remove plug with gasket.



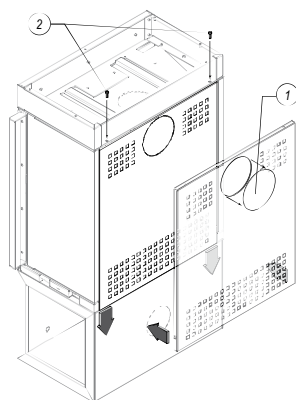
4. Remove fixing screw holding a steel deflector through the opening in the rear wall. Remove flue gas outlet socket with a gasket and lay released flue's deflector inside the furnace on a deflector made of vermiculite.



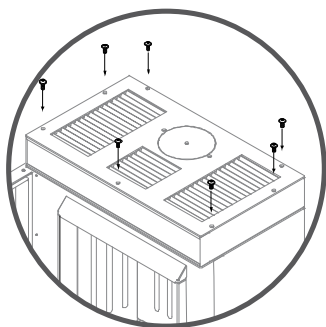
5. Plug with gasket should be placed on the top wall. All corresponding mounting holes should be matched. Lift flue deflector and tighten the plug with gasket to the steel deflector using screws.



6. Move the flue gas outlet with a gasket to rear wall of the furnace in a way ensuring that that shearing is located on the top; Tighten screws fixing the socket.



7. Gently break off the plug (1) in rear cover of the furnace and then slide the cover to its place. Tighten screws (2) fixing the cover to the top wall of the stove



8. Install the top cover of the stove.

7.4. SHUTTING THE STOVE DOWN

It is recommended completely shutdown the stove and clean the equipment when each heating season is finished.

8. TROUBLESHOOTING

Some anomalies indicating irregularities in operation can occur during operation of the equipment. It can be caused by incorrect installation of the equipment without observation of the applicable building regulations or provisions of this manual or by external causes e.g. natural environment.

Below you will find the most frequent causes of incorrect of the equipment with their solutions.

Smoke draw back when the doors are opened:

- the too rapid opening of the doors (open the doors slowly);
- if chimney damper has been installed as a chimney draught regulator - open the chimney damper each time when the doors are opened;
- insufficient air inflow to the room, where the equipment is installed (ensure proper ventilation in the room or supply air to the combustion chamber in compliance with guidelines in the manual);
- atmospheric conditions: low pressure, mists and precipitation, sharp changes in temperature;
- insufficient chimney draught (carry out chimneysweep inspection of the flue).

Insufficient heating or damping:

- too low amount of fuel in the furnace (charge furnace in compliance with the manual);
- the too high moisture content of wood used for combustion (use wood with moisture content <20%) a large part of obtained energy lost in water evaporation process;
- too low chimney draught (carry out chimneysweep inspection of the flue).

Insufficient heating despite good combustion in combustion chamber:

- low calorific "soft" wood (use wood as recommended in the manual);
- the too high moisture content of wood used for combustion (use wood with moisture content <20%);
- too fragmented wood, too thick chunks of wood:

Excessive contamination of window panel:

- low intensity of combustion (combustion with very small flame, use only dry wood as a fuel);
- using resinous softwood as a fuel (use dry hardwood as a fuel
- foreseen in the stove operating manual).

Correct operation can be disturbed by an atmospheric condition (air moisture content, fog, wind, atmospheric pressure) and sometimes by closely located high facilities.

In case of repeated problems you should turn to chimneysweep company to confirm the reason of such condition and to indicate the best solution for the problem.

9. MEASURES IN CASE OF FIRE IN THE FLUE /SOOT IGNITION/.



Systematic cleaning of smoke ducts should be performed to prevent soot ignition in the chimney.

Soot ignition in the chimney is burning of particles deposited inside chimney (flue) channels; the deposits are formed in the course of heating equipment's operation and were not cleaned by chimney sweeps. In the case of soot fire in the chimney the following recommendations should be observed:

- call Fire Brigade at 998 or 112, give information about what is happening and give detailed directions what is happening and how to get to the given building;
- damp a fire in the chimney by the closing inflow of cold air to the furnace chamber;
- close stove's door and cleaning holes tightly to cut off air supply (due to lack of air the fire will eventually stop);
- check the whole chimney channel for any cracks which might result in fire spread to the rooms;
- prepare fire quenching means, e.g. a fire extinguisher, a fire blanket, a hose connected to the water system, water in a container;
- make rooms and necessary information available to the Fire Brigade.



It is strictly forbidden to pour water into the chimney - the risk of a blowout.

Leaking chimney channels can be a source of burning sparks or very hot flue gas, including insensible carbon monoxide.



Chimneysweep should be called after soot fire in the chimney to perform cleaning of ducts and to inspect their technical condition.

10. REMOVAL DUE TO WEAR-OUT

The dry stove is made of materials neutral for the environment. After worn out of the stove parts connected with screws should be disassembled by unscrewing and welded parts must be cut. Elements of a stove are subject to standard waste disposal, mostly as steel scrap. Take safety precautions during disassembly of the equipment by using appropriate hand-held and mechanical devices as well as personal protective equipment (gloves, clothes, apron, glasses, etc.).

11. REMARKS ON DRY STOVE USAGE



The following rules of safe operation of the dry stoves should be strictly observed and introduced.

1. The dry stove can be used only by adult persons, who have familiarised themselves with this operating manual and have been trained in the scope of usage.
2. It is forbidden for children to be in the neighbourhood of the stove without adults.
3. Flammable liquids must not be used for torching the fuel; only solid fuel (e.g. tourist), paper can be used etc.
4. Flammable materials must not be placed on the stove and in its vicinity.
5. It is forbidden to damp a fire in a furnace with water.
6. It is forbidden to use a furnace with cracked window panel.
7. You should use fuel recommended by the manufacturer.
8. Never stand in front of the stove door while opening. Burn risk.
9. While removing ash from the stove, flammable materials cannot be located closer than 1500 mm from the stove. Ash is to be put into heat-resistant containers with a lid.
10. After a heating season has finished, the stove and smoke channel are to be precisely cleaned.

12. PRODUCT WARRANTY TERMS AND CONDITIONS

- 1) Placing warranty statement, which contents correspond to the provisions of this document, the Guarantor - manufacturer of the product - DEFRO Sp. z o.o. Sp. k. with seat in Warsaw, 00-403 Warszawa, ul. Solec 24/253, entered in the Register of Entrepreneurs of the National Court Register by the District Court in Warsaw for the capital city of Warsaw, XII Commercial Division of the National Register of Entrepreneur under the number KRS

0000620901, NIP: 9591968493, REGON: 363378898, manufacturing plant: Ruda Strawczyńska 103A, 26-067 Strawczyn, gives the Purchaser a warranty for the sold product on terms and conditions specified below.

- 2) The guarantee refers to a dry stove type with serial number (the subject of agreement - dry stove) under the condition that the product has been fully paid. Due to suitable, proven and unified standards of sales the warranty covers only product purchased in authorized points of sales of the Guarantor or from authorized distributors. A full list of authorized companies is available on the website www.defro.pl.
- 3) When the whole price will be paid and the product will be issued to the user also the warranty card will be issued. In the warranty card is missing the Purchaser should immediately contact with the Seller to obtain this document, while its lack has no influence on validity and period of the warranty given based on this statement, but it can have an influence on correct, timely processing of obligations resulting from this warranty by the Guarantor.
- 4) To allow Guarantor efficient operation the Purchaser should immediately after issuance of the product, send back a copy of correctly completed Warranty Card to the address of the Guarantor (Ruda Strawczyńska 103a, 26-067 Strawczyn). Correctly filled Warranty Card has a date, stamp and signatures in designated locations.
- 5) The Purchaser receives Warranty Terms and Conditions, Warranty Card as well as Operating Manual containing conditions for boiler's usage, installation guide and parameters regarding the chimney, fuel and boiler water.
- 6) The Guarantor guarantees that the equipment works correctly provided that all conditions specified in the Operating Manual have been met, especially with respect to parameters applying to fuel, connection to the chimney system. The warranty covers product used in compliance with its intended use and information provided in the service manual. A guarantor is not responsible for the effect of normal wear and tear of the product which is connected with the operation.
- 7) The warranty authorizations period commences on the date of issuance of the product to the Purchaser and equals:
 - a) 5 years for correct operation of the equipment,
 - b) 2 years for claddings made of heat resisting concrete - Ceramiton, while the warranty does not cover discolorations, complete change of colour or deterioration of top coats,
 - c) 1 year for the grate, deflector and gaskets of the fireplace,
 - d) elements subject to wear-out are not covered by the Warranty; these include: ceramic hardened glass, screws, nuts, handles etc.
- 8) The Warranty is valid in the Republic of Poland.
- 9) During the warranty period, the Guarantor ensures free-of-charge repairs of any physical defects of the product within the period of:
 - a) 14 days after the fault report, unless the repair requires replacement of constructions elements of the product;
 - b) 30 days after the fault report, if the repair requires replacement of constructions elements of the product;
 - c) subject to point 3 and 4 of this warranty conditions.
- 10) If, as a result of considering the warranty claim the defective product has been replaced with new one or the significant repairs have been made, then a new warranty period is applied counting from the date of delivery of the replaced or repaired product. In the case when only part, belonging to the claimed product, is replaced then the new warranty period is applied only for this part. In other cases the warranty period is prolonged by a period when the operation of the product was impossible due to a filed claim.
- 11) Registration of any physical fault to be repaired during the warranty period (fault registration) should be made by the Purchaser immediately after a fault has been found and no later than after 14 days.
- 12) Any fault is to be registered with the Guarantor (Ruda Strawczyńska 103a, 26-067 Strawczyn) by sending a complaint sheet contained in this operating manual, filled in and stamped by an authorized point of sale or authorized distributor. The fault registration should contain:

- a) type, capacity, serial number, manufacturer number (the information is located on the rating plate),
 - b) date and place of purchase,
 - c) a brief description of the fault,
 - d) detailed address and phone number of Purchaser.
- If the following cases are complained about: incorrect combustion in the device, tar deposits, smoking through the door; the fault registration should be supplemented with a copy of a chimney sweep expertise certifying that the flue meets all requirements specified in the operating manual for a given boiler's capacity.
- 13) The Guarantor shall not be responsible for exceeding of the periods mentioned in point 9 above or the Guarantor or its representatives will be ready to remove the defect within the date agreed with the Purchaser and will not be able to carry it out due to a reasons not attributable to the Guarantor (e.g. lack of proper access to devices, lack of energy or water, force majeure, Purchaser is not present etc.).
 - 14) If the Guarantor, despite being ready to carry the repair, will not be able to carry out the warranty repair twice because of the reasons attributable to the Purchaser then it is assumed that Purchaser had resigned from the claim included in the guarantee claim. Notification about the same defect in this mode is not possible.
 - 15) If the fault complained about cannot be removed and after three repairs the product is still faulty but can be used, the Purchaser has the following rights:
 - a) to obtain a discounted price for the product, proportionally to the use value of the product;
 - b) replace the product with one free of faults.
 - 16) The product can be replaced if the Guarantor decides it cannot be repaired.
 - 17) The Guarantor does not accept liability for the inappropriate choice of product with respect to the heated area (e.g. device of too low or too high power with respect to requirements). It is recommended to choose a device with cooperation with a design office or the Guarantor. The Guarantor is not liable for loss of data saved in the equipment and for economical losses and lost profits.
 - 18) The guarantor will refuse realization of Purchaser's claims resulting from this document in the case when:
 - a) will state damage or ripping of leaden seals,
 - b) identification of product will be impossible (that is conformity of the presented product with a document describing the equipment, replaced or illegible documents),
 - c) damages resulting from incorrect transport carried out or ordered by Purchaser,
 - d) particular components of the equipment were willfully replaced with non-genuine, used etc., repairs outside the authorized service of the Guarantor etc.
 - e) damages are mechanical, chemical, thermal and they are not resulting from causes in the sold product.
 - f) damages concerns wearing parts, especially: screws, nuts, handles, ceramic and sealing elements,
 - g) damages resulting from product usage inconsistently with the operating manual, that is especially when incorrect equipment operation resulting from lack of chimney draught or inappropriate power of the equipment,
 - h) faults are not significant and do not have an impact on the use value of the product.
 - 19) This warranty does not cover:
 - a) products used for business purposes or industrial uses;
 - b) components of electrical equipment;
 - c) damages caused by the other connected equipment, devices or accessories other than these recommended by the Guarantor.
 - d) damages occurred as a result action of external impacts, among other: by the action of force majeure;
 - e) damages caused by animals,
 - 20) Warranty repairs accepted by the Guarantor are carried out free of charge. The guarantor can charge the costs connected with warranty claim only in the case when a claim is not accepted as

a result of stating circumstances which are listed in points 17 and 18 mentioned above.

- 21) Notification of complaint can be considered positively only in case of:
 - a) keeping the time-limits mentioned in this document;
 - b) fulfilling the other terms and conditions of the warranty;
 - c) presentation of product proof of purchase - that is an invoice or fiscal receipt, the other proof of purchase, in compliance with the regulations;
- 22) Device installation can be carried out by a person holding general installation qualifications but an entry and stamp in the Warranty Card are required.
- 23) Device's first start-up, any repairs and other activities, which are not supposed to be carried out by the User according to the operating manual, can be carried out only by an authorized service trained by the Guarantor. Device's first start-up is payable by the Purchaser.
- 24) Warranty repair is made in the location when the product is operated. If claim applies to part of the product, including electronic equipment /electronic controller, fan etc. than the given part should be sent to the Guarantor at his expense. Returning faulty equipment is a condition to accept the claim and replace this equipment for free. Not returning the above mentioned part within 7 working days will be a subject to not accept the claim and to charge its costs to the buyer.
- 25) Provisions of this document do not limit in any way authorizations resulting from the claim submitted on the basis of statutory warranty. The warranty also had no influence on the other clamps of the Purchaser, according to the provisions of the law - including these concerning nonconformity of goods with the contract. The purchaser can exercise powers from the statutory warranty regardless of powers resulting from the guarantee. If the purchaser exercises his powers resulting from the warranty, the period for execution of powers resulting from the warranty will be suspended from the date of notice about the defect. This period will be continued from the date of refusal by the Guarantor about the execution of obligations resulting from the warranty or ineffective lapse of time for their execution.
- 26) To all matters not settled in this Warranty Card and document the provisions of the Civil Code Art. 577 - 581 shall apply.

12.1. WARRANTY CONDITIONS "48H SERVICE"

1. The "48h Service" program covers equipment manufactured by DEFRO Sp. z o.o. Sp. k.
2. Any complaints are to be made at a sales outlet or directly at the Company on the fax. no. 41 303 80 85, e-mail: serwis@defro.pl, or by a letter to company's address.
3. Fault registration can be completed if the Purchaser has a purchase confirmation and has filled in the Warranty Card correctly including a complaint sheet.
4. The DEFRO Sp. z o.o. Sp. k. "48h service" does its best to remove any faults which make it impossible/difficult for the equipment to operate within the period of two business days from the day of fault registration.
5. Fault removal time may be prolonged for reasons not dependent on DEFRO Sp. z o.o. Sp. k., such as the necessity of replacement of construction elements, lack of spare parts at the supplier, adverse weather conditions /force majeure/.
6. Failure to carry out repairs within this period cannot constitute a ground for any claims against DEFRO Sp. z o.o. Sp. k. and Authorized Service Partner.
7. To facilitate contact with service, service hotline for Customers has been set up: 509 702 720 and 509 577 900. If you call on these numbers, you will receive the necessary information and help with any service issue.

We kindly inform that possible replacement of equipment component, with the working one, claimed by the user is not unambiguous with the admission of equipment user's warranty claims and

does not end the complaint processing procedure. DEFRO reserves the right to charge the equipment's user with component replacement/repair costs, which after expertise/repair was stated as damaged by the factors independent of the boiler's manufacturer (e.g. short-circuit in electric system, overvoltage, flooding, mechanical damages not visible to the naked eye etc.) and which damages were not able to state during repairing in location of equipment operation by the service, within 60 days from date of carrying out the repair. DEFRO will issue an appropriate invoice for replacement/repair of the subject component with enclosed expertise protocol. At the same time we inform, that lack of payment for the invoice including the above mentioned costs within 14 days from its issuance results in irrevocable loss of warranty for the used equipment and this information will be entered into our computer supervision system for boilers within the warranty period. The date when the due amount is credited to the bank account given in the mentioned invoice is treated as payment date.

WARRANTY CARD

Confirmation of equipment's quality and completeness

In accordance with the conditions stated herein, warranty for a dry stove of

DEFRO HOME CUBE series type operated in compliance with the operating manual has been issued.

Equipment manufacturing number*

Equipment power* kW

User /name and surname/**

Address /street, city, postal code/**

.....

tel./fax** e-mail**

Sale date

Installation date

Start-up date

.....

(stamp and signature of a salesperson)

(stamp and signature of a salesperson)

stamp and signature of the company starting up the dry stove)

The user confirms that:

- the equipment has been delivered as complete;
- the device showed no failure during the first start-up carried out by a service company,
- has received the Operating Manual and equipment's installation manual with this Warranty Card filled in;
- has been familiarised with equipment's operation and maintenance.

.....
city and data

.....
user signature

* filled by the manufacturer

** filled by the user

The Customer and the installation and service company confirm by their own signature that their personal data can be processed for service register purposes according to the Data Protection Act of 29 August 1997 Journal of Laws no. 133, item 883.

DEFRO Spółka z ograniczoną odpowiedzialnością Sp. k.

• 00-403 Warszawa, ul. Solec 24/253 • tel. 0048 041 303 80 85 • fax 0048 041 303 91 31 • biuro@defro.pl • www.defro.pl •

14. CARRIED OUT WARRANTY REPAIRS AND MAINTENANCE.

No.	date	fault description, repaired element, description of repairs	comments	Stamp and signature of Service
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10				



WARRANTY CARD

Confirmation of equipment's quality and completeness

In accordance with the conditions stated herein, warranty for a dry stove of

DEFRO HOME CUBE series type operated in compliance with the operating manual has been issued.

Equipment manufacturing number*

Equipment power* kW

User /name and surname/**

Address /street, city, postal code/**

tel./fax** e-mail**

Sale date

Installation date

Start-up date

.....

.....

.....

(stamp and signature of a salesperson)

(stamp and signature of a salesperson)

stamp and signature of the company starting up the dry stove)

The user confirms that:

- the equipment has been delivered as complete;
- the device showed no failure during the first start-up carried out by a service company,
- has received the Operating Manual and equipment's installation manual with this Warranty Card filled in;
- has been familiarised with equipment's operation and maintenance.

.....
city and data

.....
user signature

* filled by the manufacturer

** filled by the user

The Customer and the installation and service company confirm by their own signature that their personal data can be processed for service register purposes according to the Data Protection Act of 29 August 1997 Journal of Laws no. 133, item 883.

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COMPLAINT FORM

made on..... in connection with complaint no.

SUBJECT OF COMPLAINT

EQUIPMENT TYPE: Equipment manufacturing date:
 Equipment serial no.: Equipment purchase date:

CLAIMANT

Name and surname:
 Detailed address:

Phone number:

DETAILED DESCRIPTION OF QUALITY FAULTS OR FAULTS RESULTING FROM THE MANUFACTURER'S FAULT

.....

OTHER FAULTS

.....

CLAIMANT LODGES WARRANTY CLAIM FOR (SELECT APPROPRIATE):

Warranty repair Paid repair Post-warranty paid the repair

CLAIMANT REQUESTS

In the case when a claim is not taken into consideration because circumstances, mentioned in p. 17 and 18 of the Warranty Terms are discovered, the CLAIMANT agrees to cover the costs incurred by the manufacturer's service.

.....
 (city and data) (sign of claimant) (signature of serviceman)

FAULT REMOVAL - to be filled by service

Date of informing the service technician about fault hour

Name and surname of a service technician

The way of fault removal

.....

Advice (DESCRIPTION)

.....

END OF COMPLAINT

Name and surname of service technician: Fault removal date:.....

The justness of complaint: Duration of repair:

Fault (defect) has been removed, the equipment operates correctly. I hereby confirm the removal of the fault. I declare that I have familiarised myself with conditions of warranty on the basis of which I wish to register my complaint and I agree for processing my personal data for complaint register purposes according to the Data Protection Act of 29 August 1997 (Journal of Laws No. 133 item 833).

.....
 (city and data) (sign of claimant) (signature of serviceman)

ATTENTION! In the case when a claim is not taken into consideration because circumstances, mentioned in p. 17 and 18 of the Warranty Terms are discovered, the CLAIMANT agrees to cover the costs incurred by the manufacturer's service.*

*cost per man-hour and travelling expenses are calculated according to the current price list available at www.defro.pl.



COMPLAINT FORM

made on..... in connection with complaint no.

SUBJECT OF COMPLAINT

EQUIPMENT TYPE: Equipment manufacturing date:
 Equipment serial no.: Equipment purchase date:

CLAIMANT

Name and surname:
 Detailed address:

Phone number

DETAILED DESCRIPTION OF QUALITY FAULTS OR FAULTS RESULTING FROM THE MANUFACTURER'S FAULT

.....

OTHER FAULTS

CLAIMANT LODGES WARRANTY CLAIM FOR (SELECT APPROPRIATE):

Warranty repair Paid repair Post-warranty paid the repair

CLAIMANT REQUESTS

In the case when a claim is not taken into consideration because circumstances, mentioned in p. 17 and 18 of the Warranty Terms are discovered, the CLAIMANT agrees to cover the costs incurred by the manufacturer's service.

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 (city and data) (sign of claimant) (signature of serviceman)

FAULT REMOVAL - to be filled by service

Date of informing the service technician about fault hour

Name and surname of a service technician

The way of fault removal

Advice (DESCRIPTION)

END OF COMPLAINT

Name and surname of service technician: Fault removal date:.....

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*cost per man-hour and travelling expenses are calculated according to the current price list available at www.defro.pl.



COMPLAINT FORM

made on.....in connection with complaint no.

SUBJECT OF COMPLAINT

EQUIPMENT TYPE: Equipment manufacturing date:
 Equipment serial no.: Equipment purchase date:

CLAIMANT

Name and surname:
 Detailed address:

Phone number

DETAILED DESCRIPTION OF QUALITY FAULTS OR FAULTS RESULTING FROM THE MANUFACTURER'S FAULT

.....

OTHER FAULTS

.....

CLAIMANT LODGES WARRANTY CLAIM FOR (SELECT APPROPRIATE):

Warranty repair Paid repair Post-warranty paid the repair

CLAIMANT REQUESTS.....

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The way of fault removal

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END OF COMPLAINT

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Fault (defect) has been removed, the equipment operates correctly. I hereby confirm the removal of the fault. I declare that I have familiarised myself with conditions of warranty on the basis of which I wish to register my complaint and I agree for processing my personal data for complaint register purposes according to the Data Protection Act of 29 August 1997 (Journal of Laws No. 133 item 833).

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 (city and data) (sign of claimant) (signature of serviceman)

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*cost per man-hour and travelling expenses are calculated according to the current price list available at www.defro.pl.

DECLARATION OF PERFORMANCE No. DHCUBE-01/2018

1. The identification code of product-type	KOM-DHCUBE
2. Building product (name, type, series)	Product name: Dry stove DEFRO HOME CUBE Serial number: See rating plate
3. Application of building product	Room heater fired with solid fuel in the buildings
4. Name and contact address of the manufacturer	DEFRO Spółka z ograniczoną odpowiedzialnością Sp. k. 00-403 Warszawa, ul. Solec 24/253 Manufacturing plant: 26-067 Strawczyn, Ruda Strawczyńska 103A
5. Name and contact address of authorised representative	Not applicable
6. System for assessment and verification of constancy of performance of building product	System 3
7. Name and identification number of notified body participating in the assessment of the constancy of performance of the building product	The Oil and Gas Institute - National Research Institute, Notified Body no. 1450, has made an assessment of performance based on the tests in system 3 and had issued a test report no. 3978/A2/17 and 3978/B2/17.

DECLARED PERFORMANCE

Essential characteristics	Performance	Technical specification
CO emission in combustion products	0.09 % (13% O ₂) 1173 mg/m ³ (13% O ₂)	PN-EN 13240:2008
OGC emission in combustion products	87 mg/m ³ (13% O ₂)	Commission Regulation (EU) 2015/1185
NO _x emission in combustion products	31 mg/m ³ (13% O ₂)	Commission Regulation (EU) 2015/1185
PM emission in combustion products	45 mg/m ³ (13% O ₂)	Commission Regulation (EU) 2015/1185
Temperature of external surfaces	4.2, 4.13, 5.2, 5.3, 5.6, 5.10	PN-EN 13240:2008
Electric safety	5.9	PN-EN 13240:2008
Max. permissible work pressure	not applicable	
Mechanical strength	no leaks and permanent deformations	PN-EN 13240:2008
Flue gases temperature	357 °C	PN-EN 13240:2008
Thermal power/Energy efficiency	10 kW/70.1 %	PN-EN 13240:2008
Primary fuel	hard wood fuel	operating manual

Performance of the product specified in point 1 and 2 are in compliance with the performance declared in point 8.

DECLARED PERFORMANCE

This declaration of performance has been issued on the sole responsibility of the manufacturer specified in point 4.

Signed on behalf of the manufacturer by:

Robert Dziubela – CEO

(name and position)

Warszawa, 22.01.2018


(location and date issued)



(signature)

Name and address of the equipment supplier

DEFRO Spółka z ograniczoną odpowiedzialnością Spółka komandytowa
00-403 Warszawa
Ul. Solec 24/253
Manufacturing plant:
26-067
Ruda Strawczyńska 103A

PARAMETERS OF THE EQUIPMENT	UNIT	MODEL IDENTIFICATION DEFRO HOME CUBE
Energy efficiency class	-	
Direct thermal power	kW	10.7
Indirect thermal power	kW	0.0
Energy efficiency Index EEI	-	92
Efficiency at nominal thermal power	%	70.1
Efficiency at minimal thermal power	%	N/A
Special precautions during assembly, installation or maintenance of the equipment	-	Consider guidelines included in the Service Manual delivered by the manufacturer each time before assembly, start-up or maintenance of the equipment.

service hotline

call us:

509 702 720

509 577 900

www.defrohome.pl

DEFRO[®]
heating technology

DEFRO Spółka z ograniczoną odpowiedzialnością Sp. k.,
00-403 Warszawa, ul. Solec 24/253,
Manufacturing plant:
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26-067 Strawczyn, tel.: 41 303 80 85,
fax: 41 303 91 31, biuro@defro.pl,
NIP 9591968493