



duroflame[®]

Manual

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Introduction

Dear client,

We would like to thank you for your choice of and confidence in Duroflame pellet stoves. Duroflame pellet stoves are designed, developed and manufactured in the Netherlands with the utmost precision and attention. This is to achieve the greatest possible user enjoyment and to protect the safety of both user and installer.

To enjoy your Duroflame stove as much as possible and to use the stove in the safest way, we recommend that you read this manual carefully before using the stove.

We also recommend that you keep the manual within easy reach of the stove, so that it is easily and quickly accessible. In case of loss or damage of the manual you can request a copy at Duroflame. The manual is also available on our website.

Important matters in this manual are shown with the illustrations below. Pieces of text will also be **printed in bold** to draw extra attention to them.

Important symbols:



Please note:

Please read the corresponding section carefully in connection with this warning symbol. This text contains information that you should know to ensure the proper and **safe** operation of the pellet stove.



Information:

This symbol indicates important information on the proper functioning of the pellet stove.

Due to the constant improvement of Duroflame products Duroflame reserves the right to make changes and additions to this manual without prior notice. The (partial) copying of this manual without the consent of Duroflame is prohibited.

1 Warranty conditions and recommendations

1.1 Warranty conditions

Duroflame guarantees its pellet stoves for 2 years, provided that the guarantee certificate (invoice) and accompanying documents are present. This guarantee does not apply to parts subject to normal wear and tear, for example the firebox. **The electrical and electronic components and the fans are guaranteed for 2 years, with the exception of the glow plug.** The guarantee only covers the glow plug if it can be proven to be defective at the time of purchase. The guarantee does not apply to parts which become defective due to lack of maintenance and/or the use of poor quality pellets. The guarantee shall also not apply if damage is caused by atmospheric influences, natural disasters, electrical surges, fire, faulty (electrical) installation or maintenance not carried out in accordance with the manufacturer's instructions.

- Duroflame shall ensure that the agreed deliveries are carried out properly and in accordance with the standards (prevailing in its branch), but shall never give a more far-reaching guarantee in respect of these deliveries and activities than has been expressly agreed between the parties.
- During the guarantee period, Duroflame guarantees the usual normal quality and soundness of the delivered product.
- If for the goods supplied by Duroflame a guarantee has been issued by the manufacturer or supplier, that guarantee shall apply equally between the parties. Duroflame will inform the other party about this.
- If the purpose for which the opposing party wishes to treat, process or use the goods deviates from the normal purpose of these goods, Duroflame only guarantees that the goods are suitable for this purpose if it has confirmed this in writing to the other party.
- No appeal to the guarantee is possible, as long as the other party has not paid the price agreed for the goods and/or the fee agreed for the work.
- The previous paragraph does not apply to the consumer.
- In the event of a justified appeal to the guarantee, Duroflame shall - at its discretion - take care free of charge of repair or replacement of the goods, of the correct performance of the work agreed, or of reimbursement or a reduction of the price agreed. In the event of additional damage, the provisions of the liability article contained in these general conditions shall apply.
- Contrary to the preceding paragraph, the consumer shall have the choice between repairing or replacing the goods or still properly carrying out the agreed

work, unless this cannot reasonably be demanded of Duroflame. Instead the consumer may always dissolve the contract by written declaration or demand a discount on the agreed price.

- We strongly recommend opening the stove door ajar during periods when the stove is not in use. This will prevent moisture problems in the stove.

1.2 Recommendations for safety



- Installation, repair and maintenance of the stove may only be carried out by qualified personnel. Pay particular attention to electrical connections and joints. Make sure that all electrical connections are properly secured to prevent contact with the rest of the stove.
- All local provisions, including those referring to national and European standards, must be respected when installing and using the device.
- The appliance is not intended for use by children under the age of 8. This unit may be used by children aged 8 and above and by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, if they are supervised or instructed in the safe use of the unit and understand the hazards involved. Children should not play with the machine. Keep the machine and the mains cable out of reach of children under the age of 8. Do not allow children to clean or service the machine unless they are older than 8 years and are supervised.
- After unpacking the product, check it thoroughly and carefully. If the contents of the package are incomplete or incorrect, please contact the dealer from whom you purchased the product. Do not leave packaging materials within the reach of children or persons with reduced physical, sensory or mental capabilities, for whom this could present a danger.
- All packaging materials can be reused in similar applications or possibly as waste similar to municipal solid waste, in accordance with regulations.
- A broken stove that is beyond repair contains valuable raw materials that can be reused after processing. Therefore, ask the municipal waste disposal service for advice on environmentally friendly disposal and processing.
- For the correct application and use of the stove, it is important that each user reads this manual carefully and completely and follows the instructions.
- The stove may only be used for the purpose for which it was designed. The manufacturer cannot be held liable for damage resulting from incorrect use and/or incorrect application.

- Do not place any objects on the stove and ensure that objects are placed at a safe distance from the stove. Failure to follow this recommendation can cause a fire hazard.
- The responsibility for incorrect use of the stove lies entirely with the end user and exempts Duroflame from all liability.
- Any modification of the stove and replacement with non-original parts may endanger the safety of the user and exempts Duroflame from all liability. The use of these modifications and replacements is forbidden without written permission.
- Do not twist or pull electric cables, even if the stove is disconnected from the mains.
- Do not close or reduce ventilation openings. Ventilation openings are necessary for good combustion and prevent the stove from overheating.
- Avoid touching the hot parts of the stove without protective clothing or accessories.
- It is not permitted to operate the stove with an open fire chamber door. This could lead to the formation of smoke in the room.
- The stove is an electrical device, therefore take care with moisture and liquids around the stove. Before carrying out cleaning and/or maintenance, we recommend that you switch off the stove, let it run its course and then unplug it from the mains supply.
- The stove must be connected to a circuit breaker and an earthed socket, in accordance with standards 73/23 EEC & 93/98 EEC.
- Improper installation or maintenance may cause damage to persons, animals or objects. In this case Duroflame disclaims all liability.
- The stove must be completely cleaned and serviced after every 1200 hours of operation or after every year of use.

1.3 Recommendations for operation

- Use the remote control to switch the stove off in the event of a fault or malfunction.
- After the stove has failed to start correctly, unburned pellets must be removed before a new start-up attempt is made.
- Never throw pellets into the burner pot manually.
- Never light the stove in any other way than the described start-up procedure.
- Install the stove in a suitable room, equipped with ventilation, electricity, a flue gas outlet and fire fighting equipment.
- Do not overheat the room heated by the stove, as this may cause health problems
- In case of fire in the flue gas duct, switch off the stove and keep the door closed.
- If the stove is placed on a combustible ground, a fireproof plate made of steel or glass must be placed under the stove.

2 Operation

2.1 The fuel



Duroflame pellet stoves use pellets as fuel. Pellets consist of wood fibres which are pressed together under very high pressure. After which they, without additives, take on their solid form. The **burning of raw materials other than wood pellets in Duroflame pellet stoves is not permitted**, not even for lighting the stove. If this is done, the warranty lapses and safety is compromised.

It is important that the composition of the pellets is of good quality. The quality of the pellets influences the combustion and the pollution of the stove.

Characteristics of good pellets are:

Diameter: 6-7 mm

Length: 30 mm

Hard pressed

Free of additives, adhesives and resin

Calorific value of 20.244 kJ/kg

Moisture content of 7%

Good pellets prevent the following problems:

Poor combustion

Blockage of the burn pot

Blockage of flues

A quickly soiled window

Lots of ash and unburnt pellets

 Please note: damp pellets can cause poor combustion and therefore the above-mentioned problems. Store your pellets in a dry place at least one metre away from the stove. We recommend that you choose your pellets carefully. The use of bad pellets can cause damage to your pellet stove, thus rendering the manufacturer's guarantee and liability void.

2.2 Operation

Basically, a pellet stove works as follows: The pellet stove has a built-in pellet container. From this hopper the pellets are transported to the burner pot via an auger. A glow plug ignites the pellets in the firepot. The air required for combustion is forced past the burner pot by the flue gas fan. The flue gases produced during combustion are removed by the flue gas fan.

 The pellet stove can create a warm air flow in the room in two ways, depending on the model. One way is by means of a room fan in the stove and the other way is by means of natural convection. **As these air flows also prevent the stove from overheating, it is very important that the applied air flow works and is not blocked.**

3 Use

3.1 The remote control

3.1.1 Multifunctional graphic display

View the current data of the stove and the configuration menu.



3.1.2 Up arrow

By pressing this button in the main menu, you can adjust the temperature of the stove. Used to scroll through the menu and increase variables.

3.1.3 Down arrow

By pressing this button in the main menu, you can adjust the stove's power or set a programme. Used to scroll through the menu and reduce variables.

3.1.4 Menu/Previous

This button allows you to access and exit configuration menus.

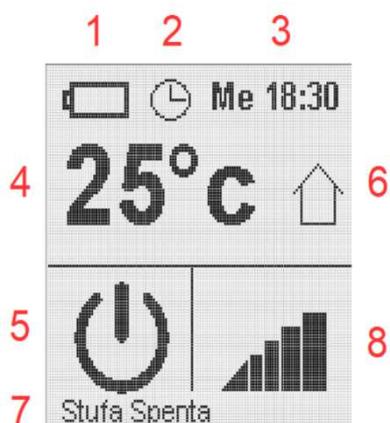
3.1.5 OK/Confirm

Confirm the settings of the menus.

3.1.6 ON/OFF

Turns on the remote control. Switches the stove on/off and resets the alarms.

3.2 Multifunctional graphic display



1. Battery status: If this symbol appears, the batteries are low. Replace the batteries to prevent the remote control from malfunctioning.
2. Timer: indicates whether the weekly programme of the stove is on.
3. Date/Time: shows the time on the stove and the date.
4. Temperature: temperature in degrees Celsius. If present, the "Home" symbol indicates the temperature measured by the internal gauge of the remote control. Press the "UP" button to see and change the temperature of the stove. Then press OK/CONFIRM.
5. Status of the stove: Displays the operating status of the stove.
6. Home: symbol indicates that the temperature displayed was measured by the remote control.
7. Stove status description: Displays the status of the stove and the work phases.
8. Stove output: Displays the heating output of the stove. By pressing the DOWN button you can view and set the stove output. Then press OK/CONFIRM.

4 Installing a stove

4.1.1 Precautions



The installation of the stove must be carried out by qualified personnel.

The stove may only be installed in a suitable room, the room must be

- Comply with the operating and environmental conditions (described in this manual).
- Be provided with electricity (230V 50 Hz (73/23/EEC))
- Be equipped with a chimney flue or vertical indoor or outdoor flue.
- Be provided with an outside air supply.
- Be grounded in accordance with EU standards.



The combustion of the pellets in the pellet stove gives rise to flue gases. To discharge these flue gases, the stove must always be connected to a chimney duct or an indoor or outdoor vertical flue. These flue gases are hardly visible, but can become very hot. Therefore, avoid contact with the fumes.

4.1.2 Stove location

The position of the stove depends on the space and the possibility of positioning the chimney/flue pipe. Consult the local authorities about the local regulations for the installation of a stove with regard to the chimney/flue pipe and other regulations that have been laid down. The manufacturer declines all responsibility if the installation does not comply with the legislation in force.

For proper cooling of the stove, proper distribution of heat from the stove and for fire safety, distances from other objects must be considered. See chapter 9 for exact dimensions, this is different for each stove. The stove must also be positioned in such a way that there is a good possibility of cleaning and maintaining the stove and the chimneys.



The stove must not be placed in a bedroom, bathroom, shower, explosive atmosphere or outdoors. The stove must also not be placed on a floor which does not appear to be suitable for the weight of the stove. If the stove is placed on a flammable surface, there must be a fireproof plate made of steel or glass under the stove.

4.1.3 Connection

Electrical connection



It is important that the stove is installed by qualified personnel. Connection to the mains is by means of the power cable supplied. Make sure that the plug always remains accessible when the appliance is installed. Make sure that the socket is properly earthed. The stove is fused with a fuse at the back of the stove.

Connection to the flue gas duct

This chapter describes the conditions which the flue gas duct must satisfy. These conditions, prescribed by us, must in no way be considered a substitute for the existing rules. All local regulations, including those referring to national and European standards, must be respected when installing the flue gas duct.

The factory is not responsible for the malfunctioning of the stove resulting from the use of a flue pipe that does not comply with the conditions and regulations.



- **Have the chimney and the pellet stove installed by qualified personnel.**
- **The internal diameter of the duct must be equal to or greater than 80 mm.**
- **Use only steel or stainless steel pipes, not plastic or aluminium, for the duct.**
- **Only use pipes with a silicone sealing ring that can withstand high temperatures.**
- For bends, always use T-pieces with an inspection possibility for annual maintenance.
- The connection between the stove and the chimney should be as short as possible to ensure a good draught and to prevent condensation.
- Do not use more than three 90° bends (tees).
- Horizontal sections should not exceed 2 metres in length with a minimum angle of 5°.
- Do not connect more than one appliance to a flue.
- Use insulated pipes outdoors to prevent condensation.

Ventilation

For good combustion in the stove, it is necessary to provide the room in which the stove is located with good ventilation. Poor combustion can be caused by poor ventilation in the house. Especially in modern, airtight houses this can happen. Also in rooms where (electric) ventilation is present, bad combustion can occur more easily. By applying/installing the right ventilation, these problems can be prevented. Good ventilation at the stove is compulsory.

The air inlet must have a total net surface area of 100 cm². This area must be increased if there is an (electrical) extractor or other heating systems in the same room (e.g. extractor hood or wood-burning stove).

It is possible to connect an external air intake on all Duroflame pellet stoves. With the use of this external air intake the pellet stove uses outside air for combustion. The combustion of the stove will then no longer be influenced by the room ventilation. Ask your dealer about the possibilities.

 The air inlets listed above must guarantee a minimum capacity of 50m³/hour. The air supply may not be blocked under any circumstances.

4.2 Starting a pellet stove

4.2.1 Starting for the first time

 **Attention!** When using the stove for the first time, please observe the following advice:

- The curing process of the lacquers is only completed after a few fires. During this curing process, vapours and odours may be released, which will not be released later.
- Operate the stove at medium power for the first few times so that all the mechanical parts can settle and the varnishes can harden. This will increase the service life of the stove.
- Keep children away from the stove, the fumes released may be harmful to their health. Adults should also be careful with these fumes and avoid inhalation as far as possible.

- Do not touch parts and surfaces until they have cooled down completely, the parts and surfaces may still be unstable.
- Ventilate the room very well several times after and during the first use.
- The initial start-up of the pellet stove can take longer than usual. Because the mortar has not yet been filled with pellets, it takes longer for the pellets to reach the burner pot.
It is even possible that it takes too long and the pellet stove will display an error message (Error1).
- In this case, hold down the ON/OFF button for a few seconds and then restart the pellet stove with the ON/OFF button.

 Carry out the following points before starting the pellet stove for the first time:

- Ensure that the pellet stove is installed correctly, as described in the previous sections.
- Fill the reservoir with pellets/check that there are pellets in the reservoir.
- Check that the burner box is positioned as far back as possible and that the glow plug is in front of the hole in the burner box.
- Check whether the door is closed properly.

4.2.2 Switching on the pellet stove

You do this by means of the power switch. The power switch is the switch that sits next to where the power cable is plugged in.

Possible malfunction: **Fout! Verwijzingsbron niet gevonden.** No image

4.2.3 Ignition



- Check whether there are enough pellets in the tank.
- Check that the burner box is clean, that it is positioned as far back as possible and that the glow plug is in front of the hole in the burner box.
- Check whether the door is closed properly.

To start the stove, press and hold the ON/OFF button for a few seconds until you hear a beep.

The display of the remote control shows: "**fan on**". Now the pellet stove will start and go through the following steps:

Cleaning.

During this phase, the burner box is cleaned. Possible malfunctions are:

- Fault: ERROR 6
- Fault: ERROR 9

Pellets are loaded and the glow plug goes on.

During this phase, pellets are added and the glow plug is turned on, until fire enters the burner.

The flue gas fan starts running more slowly. Possible malfunctions are:

- Possible malfunction: No pellet supply

Ignition and stabilisation

As soon as there is ignition, the flue gas temperature will rise and the stove will recognise this as fire. Now the stove will go into stabilisation mode for a few minutes. This means that the stove will feed less pellets to calmly start the fire. Possible malfunction:

- Fault: ERROR 1

4.3 Pellet stove in operation

The pellet stove has successfully completed its start-up procedure and is now in operation. The following text appears on the display of the remote control:

Fire on

4.4 Switching off the pellet stove

You can switch the pellet stove off with the **ON/OFF** button

You will now see the message **COOL DOWN**. This means that the stove is going to cool down to a certain safe temperature. This may take a while. When the pellet stove has cooled down sufficiently, the smoke fan (8.1.8) will stop running.

4.5 Settings

You can adjust some settings via the **MENU/PREVIOUS** button.

Under the heading "**User**" you can change the following settings:

4.5.1 Language

You can set the language here. Use the arrow buttons to switch between the languages

Use **OK** to save the changed setting.

4.5.2 Date and time

Here you can set the date and time. It starts with setting the day of the month. Pressing **OK** takes you to the month to be set. And so on.

4.5.3 Weekly programme

Here you can set a weekly programme. For example, timer 1, confirm with **OK**.

The square in front of enabled is open. This means that it is not activated. By pressing the up arrow, the box will turn white and you will activate the weekly programme. (If you have activated something incorrectly, you can empty the box again by pressing the down arrow) If you then press **OK**, you will move on to Monday, and the same applies here. The box is open, activate the Monday by pressing the up arrow and the box will become white. If you are, for example, 1 day too far, you can go back by pressing the **MENU/PREVIOUS** key.

When you arrive at the time, press and hold the up arrow. The time will increase from 00:00. When you reach the stop time and press **OK**, you will return to the main screen.

4.5.4 Loading pellets

In this menu you can run the auger to fill it with pellets.

5 Periodic maintenance

5.1 General maintenance

For a long service life of the stove, it is important to carry out regular maintenance and cleaning as described in the following paragraphs. **For (fire) safety reasons, it is necessary to have a complete maintenance carried out by qualified personnel after every year of use, or every 1200 burning hours.**



Carry out all maintenance and cleaning when the stove is off, the plug has been removed from the socket and the stove has cooled down.

Never use corrosive or aggressive cleaning agents on both external and internal parts. Use of these agents can lead to corrosion and damage. Use of these agents will invalidate the warranty.

Have defective components replaced by your dealer or manufacturer.

5.1.1 Cleaning the burn pot and ash pan

Clean the burn pot and the ash tray before each use. Cleaning the grate is important for proper combustion. Without cleaning the burn pot, the holes in the burn pot can become clogged and air can no longer reach the combustion properly. This causes slagging. Make sure when cleaning that no ash or pellets are left behind **under the burn pot**.

5.1.2 Cleaning the glass

To keep a clear view of the fire, it is necessary to clean the glass in the door. How often the glass needs to be cleaned depends on the pellets used. You can clean the glass by using a damp paper cloth dipped in ash. You can then use this cloth to wipe the glass clean. Afterwards, you can rub the pane dry.

The glass in the stove can withstand high temperatures, but it can break if it cools down too quickly. Therefore, always wait until the stove has cooled down completely before cleaning with cleaning agents. If the glass is broken, the stove must not be used any more and the glass must be replaced by qualified personnel.

5.1.3 Cleaning of lacquered metal parts

Lacquered parts can be cleaned with a moist cloth or a (natural) chamois (because of the lint that can be left behind). Do not use benzene, alcohol or similar.

5.1.4 Cleaning the combustion chamber

It is important to regularly vacuum and empty the pellet stove. For this purpose, use a Hoover suitable for sucking ash or a special ash vacuum cleaner.

5.1.5 Cleaning the pellet container

Clean the pellet container every 3 months, depending on your pellets and usage. If too much dust and sawdust accumulates at the bottom of the reservoir, the auger may not be able to load enough pellets or it may even jam and cause damage.

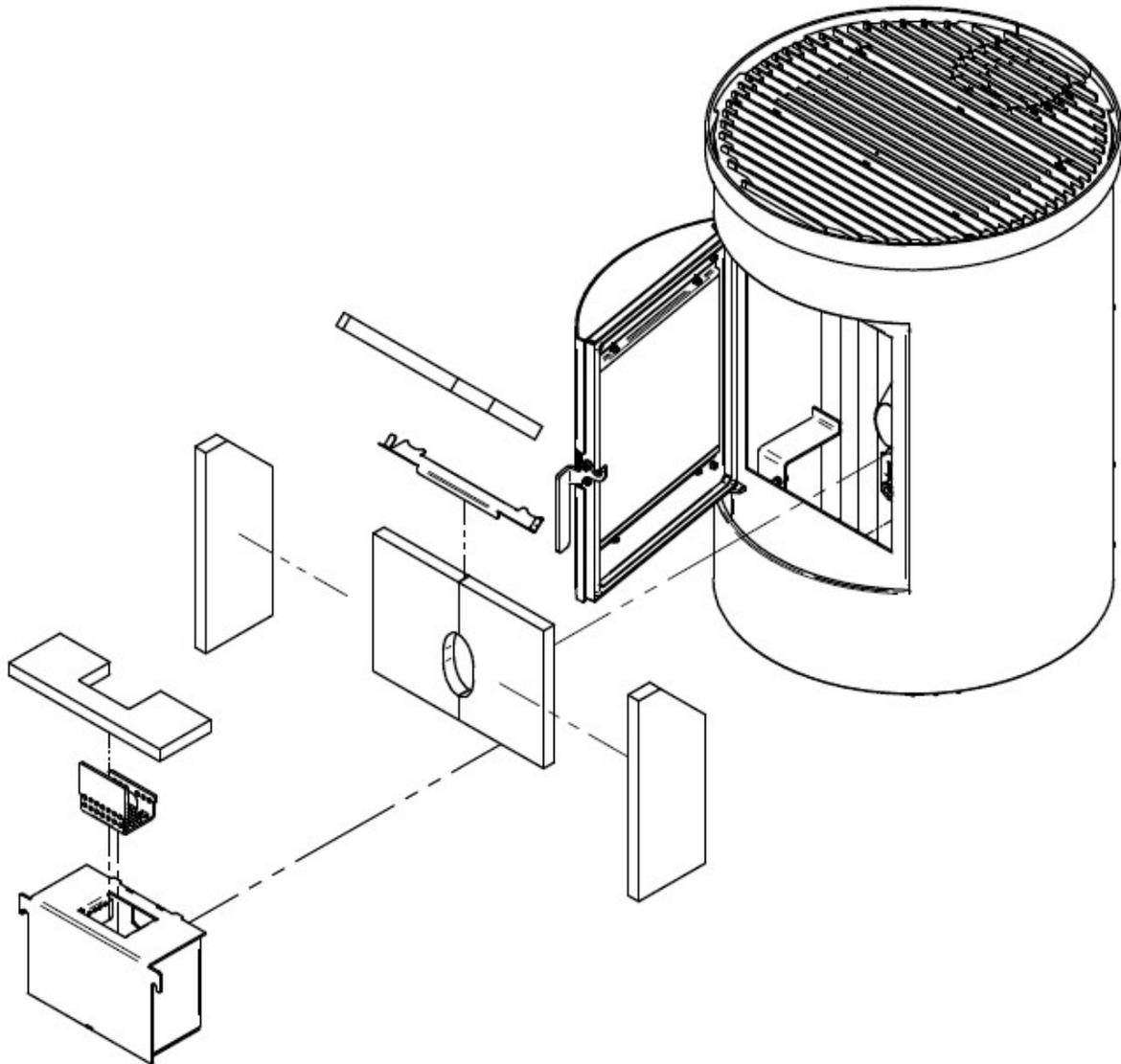
5.1.6 Maintenance schedule

Parts/ Period	For all uses	2 days	7 days	90 days	Annually & after 1200 fires
Firepot	x				
Glass		x			
Fire chamber			x		
Flues/Heat exchanger					x
Pellet container				x	

5.2 Annual maintenance

Every year or after 1200 hours of operation the pellet stove must undergo a complete maintenance for the preservation of the stove and your own safety. For this purpose the stove must be dismantled completely and the heat exchanger and the flue must be cleaned. This is important because otherwise the stove will be clogged up with ash and dust. This annual maintenance has to be done by qualified personnel. Below you will find the different models with the parts to disassemble for cleaning the flue and heat exchanger.

5.2.1 Abel/Abel Large



6 Problems and solutions

6.1 No pellet supply

The stove does not feed pellets.

Possible causes:

- One of the safety sensors is switched on, this can be the maximum thermostat (see component 8.1.6) or the pressure switch (see component 8.1.5).
- The screw motor (see component 8.1.3) is defective.
- The auger (see component 8.1.4) is stuck or blocked.
- No pellets in the pellet container.

6.2 No ignition

The stove measures the rise in temperature of the flue gases by means of the flue gas temperature sensor (component 8.1.11). If the temperature does not rise quickly enough, the stove will fail. For this, a distinction must be made between ignition and non-ignition.

There is actually no ignition and no fire.

Possible causes:

- The glow plug is defective (see component 8.1.7 Glow plug)
- Too little oxygen. This can have several causes:
 - The stove is clogged and requires maintenance (5.2 Annual maintenance)
 - The flue gas fan (8.1.8) does not run fast enough and does not extract enough air.
 - There is too much underpressure in the house. Examples of causes are: too little ventilation, mechanical central extraction, cooker hood in the kitchen. You can check this by opening a window near the stove. If the stove burns properly then you have too much underpressure in the house.

There is a fire and ignition, but the stove does not measure the flue gas temperature sufficiently. Possible causes:

- Flue gas temperature sensor (8.1.11) is defective.
- The ignition takes too long. One solution is to increase the speed of the flue gas fan and the pellet supply a little.

6.3 Pellet stove gets too hot

If the pellet stove becomes too hot, it will go into alarm and then ERROR 6 (see 7.1.3) in the display. The maximum thermostat (see 8.1.6) then switches on. This can be due to various reasons:

- The combustion is too hot. This can be caused by pellets containing too much energy. The pellet supply must be adjusted downwards.
- The flue gas fan (see 8.1.8) cannot discharge sufficient flue gas and therefore heat. Check whether the burner box is clean. The pellet stove may also require maintenance.
- The pellet stove is covered. If the pellet stove is covered, it can no longer lose its heat.
- The convection fan is broken (see 8.1.9). You can no longer feel the stove blowing. This applies only to versions with a convection fan.

6.4 It gets too hot in the house

The temperature in the house rises more than you have set. This can have several causes:

- The stove has too much power in P1. In most cases this is the cause, there is nothing wrong with the stove. You have set the stove to e.g. 20°C but the temperature rises much higher. Check whether the stove actually modulates back to P1. Bear in mind that a pellet stove gives off approx. 3kW of heat at the lowest setting. This means that in a small and/or well-insulated room, the temperature will continue to rise for as long as you leave the stove on. If you do not want the temperature to rise further, provide for sufficient ventilation or switch the stove off.

- The room temperature sensor (8.1.12) may be incorrectly located, if it is on the floor or against the wall, it will measure the wall or floor temperature instead of the room temperature.
- The room temperature sensor (8.1.12) is defective. In this case, the stove cannot read the temperature properly and reacts accordingly.

7 Fault reports and solutions

 You can reset the fault by keeping the ON/OFF  button pressed until the stove beeps.

7.1.1 ERROR 1

No ignition, this message is given when there is no ignition.

See 6.2 No ignition

7.1.2 ERROR 5

No pellets. The flue gas temperature is too low. Possible causes:

- The hopper is empty. Fill the hopper with pellets.
- There is a defect, see 6.1 No pellet supply

7.1.3 ERROR 6

This fault message can have two causes:

- Component 8.1.5 Pressure monitor
- Component 8.1.6 Maximum thermostat

7.1.4 ERROR 8

This error message is given if the power is interrupted when the stove is in the ignition, operating or cooling phase. You can reset this fault by pressing and holding the ON/OFF button  until the stove beeps.

7.1.5 ERROR 9

This fault message appears when no revolutions are measured from the flue gas fan. Check that the fan is actually not rotating. You can run the fan using the component test (see 9.1.2)

- The flue gas fan is not running (component 8.1.8 Flue gas fan). Check whether something is blocking the fan. If the fan is not blocked, check the plugs and cables.
- The fan is running. Check the encoder (8.1.10). This is the sensor that measures the speed of the flue gas fan.

7.1.6 "Service"

This message is displayed when the stove has been burning for 1200 hours. The stove indicates this to remind you to have maintenance carried out.

8 Components

8.1 Explanation of parts

8.1.1 Circuit board

The circuit board or also called motherboard controls all components in the heater.

8.1.2 Data cable

The data cable or flatcable connects the circuit board and the control panel.

8.1.3 Auger motor

The auger motor is attached to the bottom of the auger or so-called worm. This is an electric motor with a transmission to 1 rpm.

8.1.4 Mortar

This is a shaft with a spindle around it. It rotates at low speed by means of the auger motor and raises the pellets.

8.1.5 Pressure monitor

The pressure switch measures the back pressure in the outlet. If the back pressure (e.g. due to wind) is too high, the switch will switch and the stove will malfunction. The auger motor will then receive no power.

8.1.6 Maximum thermostat

The maximum thermostat monitors the maximum temperature of the pellet tank. As soon as this becomes too high, the thermostat will switch over and the stove will malfunction. The auger motor will then receive no power.

You can reset the maximum thermostat by pressing the reset button. This can be found at the back of the heater. Here you will see a black cap with a diameter of approximately 1cm that you can unscrew, behind this is a white button. You can press this to reset the maximum thermostat.

8.1.7 Glow plug

The glow plug is an element which glows during ignition. It is located in the tube that you can see at the bottom of the burner box.

8.1.8 Flue gas fan

The flue gas fan takes care of the extraction of the flue gases in the stove and creates a negative pressure in the stove and blows flue gases into the flue pipe. In this way, oxygen is also sucked through the firebox. The flue gas fan rotates at different speeds to ensure proper combustion.

8.1.9 Convection fan

The convection fan blows air from the room through the heat exchanger to cool the pellet stove. (Not included in every Duroflame model)

8.1.10 Encoder

This is a sensor that measures the speed of the flue gas fan. This is usually a black cap on top of the flue fan with a small wheel inside. On a pellet stove with a continuously running auger motor, this encoder is also on the auger motor.

8.1.11 Flue gas temperature sensor

This is a sensor that measures the temperature of the flue gases. In this way, the stove can determine how much fire is present in the stove.

8.1.12 Room temperature sensor

This is a sensor that measures how warm it is in the room. Based on this, the stove can determine whether it should modulate. Make sure that this sensor is placed in a representative place. Do not place it directly on the floor or against a wall. In that case it will not measure the ambient temperature but the floor or wall.

9 Component test

Here you can test all components.

To access the menu, press **MENU/PREVIOUS** once, move the arrow down to **TECH** and press **OK**. You will see a menu on the display screen, you need to go with the down arrow to **TEST** and then press **OK**.

You can only test the components when the stove is not burning.



9.1.1 Testing the auger motor

When you press **OK**, the mortar will start to rotate, when you press **OK** again, the test will stop. This is also shown in the display of the remote control.

9.1.2 Testing flue gas fan

If you press **OK**, the flue gas fan starts, if you press **OK** again, the test stops. This is also shown in the display of the remote control.

9.1.3 Testing convection fans

Pressing **OK** switches on the convection fan, if fitted. When you press **OK** again, it will switch off. This is also shown on the display of the remote control.

9.1.4 Testing the channelling motor

N/A

9.1.5 Testing the glow plug

When you press **OK**, the glow plug goes on, when you press **OK** again it goes off again. This is also shown in the display of the remote control.

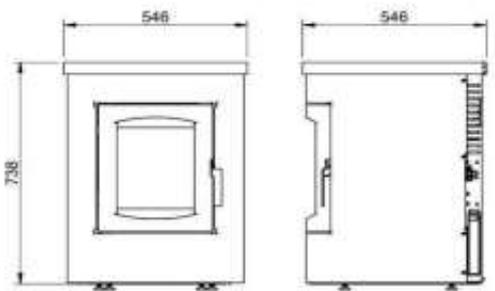
10 Resetting the burning hours

1. Press the **ON/OFF** button (6) to power on the handset.
2. Press **MENU/ESC** (4) and go to "**TECH**" with the **UP** arrow (2) and confirm with **OK** (5).
3. Then go to **PARAMETERS** and confirm with **OK** (5)
4. Here you have to select a code with the **arrow keys** (2)(3). (It now says 00)
- Go to **55** and press **OK** (5),
5. To go back, press **MENU/ESC** (4).

12 Technical specifications

 **Abel** 

Pelletkachel bestemd voor gebruik in huiselijke ruimtes.



Afstand tot aangrenzende brandbare materialen:

Voorzijde: 80 cm	Zijkanten: 5 cm	Achterzijde: 5 cm
------------------	-----------------	-------------------

Prestaties	Nominaal	Minimaal
Vermogen	5,0 kW	2,7 kW
Rendement	91,8%	94,8%
Rookgastemp.	90 °C	43 °C
Verbruik	1,09 kg	0,56 kg
Stroomverbruik	0,024 kW	0,019 kW
CO bij 13% O ₂	226 mg/m ₀ ³	726 mg/m ₀ ³
NO _x bij 13% O ₂	191 mg/m ₀ ³	164 mg/m ₀ ³
C _x H _y bij 13% O ₂	11 mg/m ₀ ³	19 mg/m ₀ ³
Stof bij 13% O ₂	16 mg/m ₀ ³	26 mg/m ₀ ³

Gewicht	77,3 kg
Max. stroomverbruik	420 W
Netspanning	230 V - 50 Hz
Rookgasafvoer	∅ 80 mm
Luchtinlaat	∅ 40 mm
Materiaal, maximale afmetingen en vochtgehalte pellets	Hout, ∅ 7 mm, Lengte: 30 mm, Vocht < 12 %

Gebruik alleen aanbevolen brandstof.

Elektronische sturing inclusief wektijdschakelaar.

Lees voor gebruik de handleiding.

Prestatieverklaring: Nr. 1880

NEN-EN 14785:2006

Notified Body: SGS Nederland BV (N.B. 0608)

Rapport: EZKA/2020-04/00002-1

Made in Holland

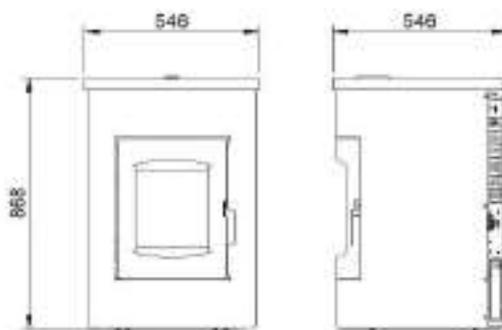
Verbindingsweg 17, 9781 DA Bedum



Abel Large

A*

Pelletkachel bestemd voor gebruik in huiselijke ruimtes.



Afstand tot aangrenzende brandbare materialen:

Voorzijde: 60 cm | Zijkanten: 5 cm | Achterzijde: 5 cm

Prestaties	Nominaal	Minimaal
Vermogen	5,0 kW	2,7 kW
Rendement	91,8%	94,8%
Rookgas temp.	90 °C	43 °C
Verbruik	1,09 kg	0,56 kg
Stroomverbruik	0,024 kW	0,019 kW
CO bij 13% O ₂	226 mg/m ₀ ³	726 mg/m ₀ ³
NO _x bij 13% O ₂	191 mg/m ₀ ³	164 mg/m ₀ ³
C _x H _y bij 13% O ₂	11 mg/m ₀ ³	19 mg/m ₀ ³
Stof bij 13% O ₂	16 mg/m ₀ ³	26 mg/m ₀ ³

Gewicht	81,9 kg
Max. stroomverbruik	420 W
Netspanning	230 V - 50 Hz
Rookgasafvoer	ø 80 mm
Luchtinlaat	ø 40 mm
Materiaal, maximale afmetingen en vochtgehalte pellets	Hout, ø 7 mm, Lengte: 30 mm, Vocht < 12 %

Gebruik alleen aanbevolen brandstof.

Elektronische sturing inclusief weektijdschakelaar.

Lees voor gebruik de handleiding.



Prestatieverklaring: Nr. 1890

NEN-EN 14785:2006

Notified Body: SGS Nederland BV (N.B. 0608)

Rapport: EZKA/2020-04/00002-1

Made in Holland

Verbindingsweg 17, 9781 DA Bedum

11 Statements of conformity



EU-CONFORMITEITSVERKLARING

Product:

Abel

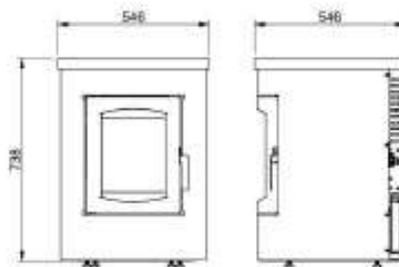
Fabrikant:

Duroflame BV
Verbindingsweg 17
9781 DA Bedum – Nederland

Deze conformiteitsverklaring wordt verstrekt onder volledige verantwoordelijkheid van de fabrikant.

Productomschrijving:

Pelletkachel bestemd voor gebruik in huiselijke ruimtes.



Het hierboven beschreven voorwerp is conform de volgende richtlijn(en) en norm(en):

2019/125/EG (betreffende de totstandkoming van een kader voor het vaststellen van eisen inzake ecologisch ontwerp voor energiegerelateerde producten)

2011/65/EU (betreffende beperking van het gebruik van bepaalde gevaarlijke stoffen in elektrische en elektronische apparatuur)

NEN-EN 14785:2006 (Huishoudelijke ruimteverwarmingstoestellen gestookt met geperst hout – Eisen en beproevingsmethoden)

NEN-EN-IEC 60335-2-102:2016 Huishoudelijke en soortgelijke elektrische toestellen - Veiligheid - Deel 2-102: Bijzondere eisen voor branders met elektrische connectoren op gas, olie en vaste brandstoffen tel en/of recycling koelmiddelen van airconditioning en apparatuur voor koelmiddelen

Het hierboven beschreven voorwerp is conform de volgende verordening(en):

(EU) 305/2011 (tot vaststelling van geharmoniseerde voorwaarden voor het verhandelen van bouwproducten en tot intrekking van Richtlijn 89/106/EEG van de Raad)

(EU) 2015/1185 (tot uitvoering van Richtlijn 2009/125/EG van het Europees Parlement en de Raad wat eisen inzake ecologisch ontwerp betreft voor toestellen voor lokale ruimteverwarming die vaste brandstoffen gebruiken)

Initiële type test is uitgevoerd door:

SGS Nederland BV (NB 0608)
Keuringsrapport: EZKA/2020-04/00002-1

Ondertekend voor en namens de fabrikant door:

Aldrik Sebens (algemeen directeur)

Bedum, 28-10-2020

Product:

Abel Large

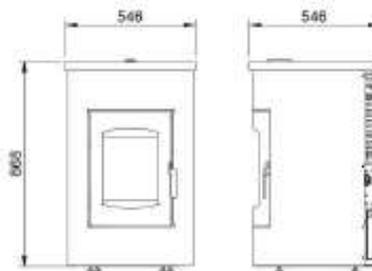
Fabrikant:

Duroflame BV
Verbindingsweg 17
9781 DA Bedum – Nederland

Deze conformiteitsverklaring wordt verstrekt onder volledige verantwoordelijkheid van de fabrikant.

Productomschrijving:

Pelletkachel bestemd voor gebruik in huiselijke ruimtes.



Het hierboven beschreven voorwerp is conform de volgende richtlijn(en) en norm(en):

2019/125/EG (betreffende de totstandkoming van een kader voor het vaststellen van eisen inzake ecologisch ontwerp voor energiegerelateerde producten)

2011/65/EU (betreffende beperking van het gebruik van bepaalde gevaarlijke stoffen in elektrische en elektronische apparatuur)

NEN-EN 14785:2006 (Huishoudelijke ruimteverwarmingstoestellen gestookt met geperst hout – Eisen en beproevingsmethoden)

NEN-EN-IEC 60335-2-102:2016 Huishoudelijke en soortgelijke elektrische toestellen - Veiligheid - Deel 2-102: Bijzondere eisen voor branders met elektrische connectoren op gas, olie en vaste brandstoffen tel en/of recycling koelmiddelen van airconditioning en apparatuur voor koelmiddelen

Het hierboven beschreven voorwerp is conform de volgende verordening(en):

(EU) 305/2011 (tot vaststelling van geharmoniseerde voorwaarden voor het verhandelen van bouwproducten en tot intrekking van Richtlijn 89/106/EEG van de Raad)

(EU) 2015/1185 (tot uitvoering van Richtlijn 2009/125/EG van het Europees Parlement en de Raad wat eisen inzake ecologisch ontwerp betreft voor toestellen voor lokale ruimteverwarming die vaste brandstoffen gebruiken)

Initiële type test is uitgevoerd door:

SGS Nederland BV (NB 0608)
Keuringsrapport: EZKA/2020-04/00002-1

Ondertekend voor en namens de fabrikant door:



Aldrik Sebens (algemeen directeur)

Bedum, 23-03-2021

- | | |
|---|---|
| 1. Unieke identificatiecode van het producttype: | Abel |
| 2. Beoogde gebruik: | Huishoudelijke ruimteverwarmingstoestellen gestookt met houtpellets, zonder warmwaterproductie |
| 3. Fabrikant: | Duroflame BV
Verbindingsweg 17
9781 DA Bedum – Nederland |
| 4. Gemachtigde: | - |
| 5. Het systeem of de systemen voor de beoordeling en verificatie van de prestatiebestendigheid: | Systeem 3 |
| 6. Geharmoniseerde norm: | NEN-EN 14785:2006 |
| Aangemelde instantie: | SGS Nederland BV (NB 0608) |
| Referentie keuringsrapport: | EZKA/2020-04/00002-1 |
| 7. Aangegeven prestaties: | |

Essentiële kenmerken	Prestaties	Geharmoniseerde norm
Brandveiligheid		
Brandveiligheid:	Conform	NEN-EN 14785:2006
Minimumafstand tot brandbare materialen:	Voorkant: 80 cm Achterkant: 5 cm Zijkant: 5 cm Plafond: -	NEN-EN 14785:2006
Vrijkomen van gevaarlijke stoffen:	Conform	NEN-EN 14785:2006
Oppervlaktetemperatuur:	Conform	NEN-EN 14785:2006
Uitstoot van verbrandingsproducten		
Nominaal vermogen: (bij 13% O ₂)	CO: 0,02 vol% CO: 226 mg/m ₀ 3 NO _x : 191 mg/m ₀ 3 C _x H _y : 11 mg/m ₀ 3 Dust: 16 mg/m ₀ 3	NEN-EN 14785:2006
Gereduceerd vermogen: (bij 13% O ₂)	CO: 0,06 vol% CO: 726 mg/m ₀ 3 NO _x : 164 mg/m ₀ 3 C _x H _y : 19 mg/m ₀ 3 Dust: 26 mg/m ₀ 3	NEN-EN 14785:2006
Elektrische veiligheid:	Conform	EN 60335-2-102
Reinigbaarheid:	Conform	NEN-EN 14785:2006
Maximale bedrijfsdruk:	- bar	NEN-EN 14785:2006
Rookgastemperatuur:	T [90°C]	NEN-EN 14785:2006
Mechanische sterkte (ter ondersteuning rookkanaal):	N.P.D.	
Thermische prestaties		
Nominaal vermogen:	5,0 kW	NEN-EN 14785:2006
Vermogen afgegeven aan omgeving:	5,0 kW	
Vermogen afgegeven aan water:	-	
Rendement		
Nominaal vermogen:	η[91,8%]	NEN-EN 14785:2006
Gereduceerd vermogen:	η[94,8%]	
Duurzaamheid:	Conform	

De prestaties van het hierboven omschreven product zijn conform de aangegeven prestaties. Deze prestatieverklaring wordt in overeenstemming met Verordening (EU) nr. 305/2011 onder de exclusieve verantwoordelijkheid van de hierboven vermelde fabrikant verstrekt.

Ondertekend voor en namens de fabrikant door:



Bedum, 28-10-2020

Aldrik Sebens (algemeen directeur)



PRESTATIEVERKLARING

in overeenstemming met Verordening (EU) nr. 305/2011

Nr. 1890

1. Unieke identificatiecode van het producttype: **Abel Large**
2. Beoogde gebruik: **Huishoudelijke ruimteverwarmingstoestellen gestookt met houtpellets, zonder warmwaterproductie**
3. Fabrikant: **Duroflame BV
Verbindingsweg 17
9781 DA Bedum – Nederland**
4. Gemachtigde: **-**
5. Het systeem of de systemen voor de beoordeling en verificatie van de prestatiebestendigheid: **Systeem 3**
6. Geharmoniseerde norm: **NEN-EN 14785:2006**
Aangemelde instantie: **SGS Nederland BV (NB 0608)**
Referentie keuringsrapport: **EZKA/2020-04/00002-1**
7. Aangegeven prestaties:

Essentiële kenmerken	Prestaties	Geharmoniseerde norm
Brandveiligheid		
Brandveiligheid:	Conform	NEN-EN 14785:2006
Minimumafstand tot brandbare materialen:	Voorkant: 80 cm Achterkant: 5 cm Zijkant: 5 cm Plafond: -	NEN-EN 14785:2006
Vrijkomen van gevaarlijke stoffen:	Conform	NEN-EN 14785:2006
Oppervlaktetemperatuur:	Conform	NEN-EN 14785:2006
Uitstoot van verbrandingsproducten		
Nominaal vermogen: (bij 13% O ₂)	CO: 0,02 vol% CO: 226 mg/m ₀ 3 NO _x : 191 mg/m ₀ 3 C _x H _y : 11 mg/m ₀ 3 Stof: 16 mg/m ₀ 3	NEN-EN 14785:2006
Gereduceerd vermogen: (bij 13% O ₂)	CO: 0,06 vol% CO: 726 mg/m ₀ 3 NO _x : 164 mg/m ₀ 3 C _x H _y : 19 mg/m ₀ 3 Stof: 26 mg/m ₀ 3	NEN-EN 14785:2006
Elektrische veiligheid:	Conform	EN 60335-2-102
Reinigbaarheid:	Conform	NEN-EN 14785:2006
Maximale bedrijfsdruk:	- bar	NEN-EN 14785:2006
Rookgastemperatuur:	T [90°C]	NEN-EN 14785:2006
Mechanische sterkte (ter ondersteuning rookkanaal):	N.P.D.	
Thermische prestaties		
Nominaal vermogen: Vermogen afgegeven aan omgeving: Vermogen afgegeven aan water:	5,0 kW 5,0 kW -	NEN-EN 14785:2006
Rendement		
Nominaal vermogen: Gereduceerd vermogen:	η[91,8%] η[94,8%]	NEN-EN 14785:2006
Duurzaamheid:	Conform	

De prestaties van het hierboven omschreven product zijn conform de aangegeven prestaties. Deze prestatieverklaring wordt in overeenstemming met Verordening (EU) nr. 305/2011 onder de exclusieve verantwoordelijkheid van de hierboven vermelde fabrikant verstrekt.

Ondertekend voor en namens de fabrikant door:

Aldrik Sebens (algemeen directeur)

Bedum, 23-03-2021

