



# Morsø P50/51

Instructions for installation and use



**P50**



**P51**

## CONTENTS

1.0	Installation of your morsø stove	5
2.0	Stoking technique/ Use of your stove	13
3.0	Regular maintenance of the stove	28
4.0	Technical data	39



By appointment to The Royal Danish Court

# morsø

## Instructions for installation and use

### Morsø P50/51



**P50**



**P51**

**EN 14 785**

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## Congratulations on the purchase of your new Morsø pellet stove!

Morsø, the largest supplier of the Danish market, has produced wood-burning stoves of the highest quality since 1853. If you just follow these instructions, we are sure that you will enjoy and make good use of your new stove for many years.

		Page no.
<b>1.0</b>	<b>Installation of your morsø pellet stove</b>	<b>5</b>
	1.1 Before installation	5
	1.2 Location, assembly and installation	5
	1.3 Stove location/ Offsets	6
	1.4 The chimney	7
	1.5 Chimney sweep	7
	1.6 Example of chimney installations	8
<b>2.0</b>	<b>Stoking technique/ Use of your stove</b>	<b>13</b>
	2.1 General	13
	2.2 Construction of the pellet stove	13
	2.3 Timber (white) pellets	14
	2.4 Safety equipment	14
	2.5 Description of the controls	16
	2.6 Description of the menus	16
	2.7 Functions and operation of your stove	23
<b>3.0</b>	<b>Regular maintenance of the stove</b>	<b>28</b>
	3.1 Cleaning	28
	3.2 Description of alarms	34
	3.3 Information and problems	35
	3.4 Guarantee conditions	37
	3.5 Liability	37
	3.6 Spare parts	38
	3.7 Electrical diagram	38
<b>4.0</b>	<b>Technical data</b>	<b>39</b>

### Test certificates - must accompany the stove

The Danish Wood Burning Stove Act came into force on 1 January 2008. In connection with the introduction of the Danish Wood Burning Stove Act there is a requirement for pellet fuel burners to be accompanied by a test certificate issued by an accredited testing institution that has carried out environmental tests on the stove.

The test certificate is enclosed with the stove and must be retained by the owner and accompany the stove for its lifetime.

The installation of your Morsø Pellet stove must be approved by a suitable qualified fitter or local building control.

### Extra accessories

An extensive range of chimney, floor plates and accessories is available for your Morsø stove, to ease the day-to-day operation and maintenance of your Morsø stove.

## 1.0 Installation of your morsø stove

### Before installation

Please direct any queries to your Morsø dealer.

- Prepare the location where the pellet stove is to be installed in accordance with local, national and European legal requirements.
- Incorrect installation or poor maintenance (not in accordance with that described in this guidance) can result in injury or damage to persons or objects. Morsø accepts no civil or criminal liability in such an event.
- The chimney system must be connected before the electrical pellet stove is connected to the power supply.
- The protection grille fitted inside the pellet hopper must never be removed.
- There must be sufficient ventilation in the room where the pellet stove is to be installed.
- The installation, electrical connection, functional check and maintenance must be carried out by qualified and authorised persons.

### Location, assembly and installation

The location of the pellet stove in a habitable room is critical for heating the room uniformly. Before deciding where to fit the pellet stove, you should take account of the following:

- Combustion air may not be supplied from a garage or room without ventilation or extraction, but must be drawn from an open space or from outside.
- Installation of a pellet stove in a bedroom, bathroom or wet room, or in which another heater without a separate air supply (fireplace, wood-burning stove, etc.) is already installed, is prohibited.
- Installation of a stove surroundings with an explosive atmosphere is prohibited.
- It is beneficial to install the pellet stove in a central location within the room to ensure maximum circulation of heat.
- The power supply must be provided with an earth connection (if the cable supplied is not long enough to reach the socket, an extension cable laid on the floor must be used).
- The pellet stove must be placed where there is sufficient air supply for pellet combustion (approx. 50m<sup>3</sup>/h of air must be available) in accordance with the installation requirements and the current provisions of the country concerned.
- The volume of the room may not be below 30 m<sup>3</sup>.

### IMPORTANT!

**THE PELLETT STOVE MUST BE INSTALLED AND ASSEMBLED BY QUALIFIED PERSONS**

The room must be:

- prepared so that conditions are appropriate for operation of the pellet stove
- provided with an appropriate flue gas chimney system
- provided with a 230V 50Hz (EN 73-23) power supply
- Provided with permanent ventilation complying with national building regulation for solid fuel appliances (or a direct air supply from outside to the pellet stove not less than 80 mm diameter.
- provided with a CE compliant earth connection.

The pellet stove must be connected to a SINGLE exhaust duct (chimney) or a vertical internal or external duct in accordance with current provisions.

Combustion of timber (white) pellets causes smoke, which can deposit soot if it comes in contact with walls.

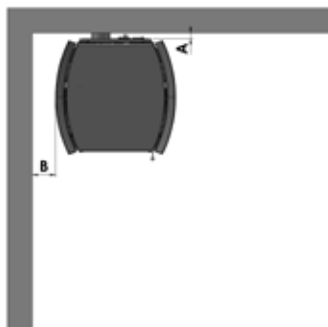
Fitting a grille to the end of the chimney that may lead to poor operation of the stove is strictly prohibited.

Approved flues and joints with appropriate silicone seals must always be used to ensure the tightness of the flue.

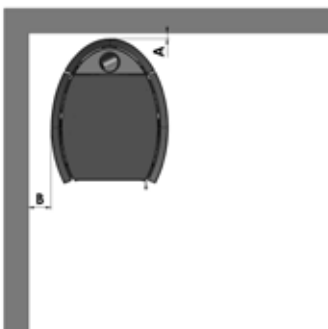
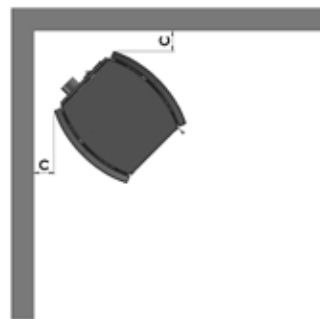
No more than 3 no. 90° bends may be used to connect the chimney, and they may not be used more than 2-3 m horizontally.

### Stove location/ Clearance

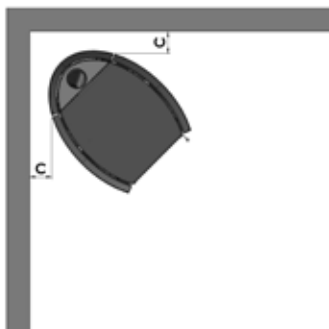
Clearances only apply when the stove is to be placed near flammable materials. Your new stove may be located as stated on the approval sign on the rear of the stove if the walls made of flammable material.



P50



P51



### Min. clearance to flammable material:

Installation	Stove type	Distance A	Distance B	Distance C	Distance in front of stove
Normal right-angled	Morsø P50/51 uninsulated flues	25 mm.	100 mm.	-	650 mm
Corner installation	Morsø P50/51 uninsulated flues	-	-	50 mm.	

With regard to heat circulation, cleaning and possible internal cleaning of the stove, the recommended distance to walls is 10-15cm.

### Distance to furniture

The clearance to flammable material in front of the stove is 650 mm. With regard to positioning furniture, the clearance to flammable material must be complied with, but you should consider whether furniture and other items would be dried out so near the stove.

A pellet stove becomes hot when lit. You should therefore take the necessary care, especially with regard to children coming into contact with the stove.

### On the floor

If the stove is fitted on a combustible floor, the national and local provisions must be complied with regard to the size of incombustible hearth required to cover the floor below the stove. You should naturally ensure that the sheet can support the weight of the stove and possibly the steel chimney. (The hearth temperature beneath the P50 and P51 pellet stove does not exceed 100°)

### The chimney

A modern efficient stove imposes greater requirements on your chimney. Therefore, you should let the chimney sweep assess the chimney.

The chimney opening must comply with national and local provisions.

Too large a chimney opening leads to too much energy being used to heat the chimney to obtain an acceptable draught. A brick chimney with a large opening must have an insulated lining of the right diameter. This results in increased draught and better fuel economy.

There are no particular requirements for chimney height, but it must be high enough to obtain a good draught and avoid smoke nuisance. As a general rule, a satisfactory draught is achieved if the chimney is 4 metres above the stove and no less than 80 cm above the ridge. If the chimney is on the side of the building, the top of the chimney should never be lower than the ridge or the highest point on the roof.

Morsø recommends a minimum draught in the chimney of 10 pa.

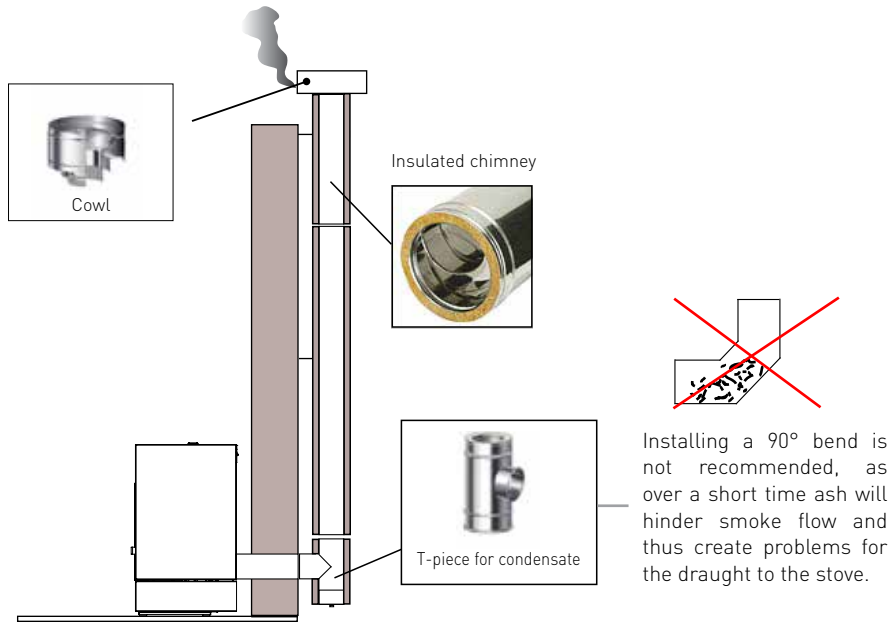
As a general rule, an insulated steel flueliner recommended for pellet stoves will give the best draught. This means an insulated steel flueliner with an inner diameter of 80 mm.

### Chimney sweep

As mentioned, it may be wise to consult the local chimney sweep before installing the stove. In any case, the chimney sweep must be informed when the pellet stove is fitted. If the chimney has not been used for some time, it should be checked for cracks, birds' nests etc. before being used again.

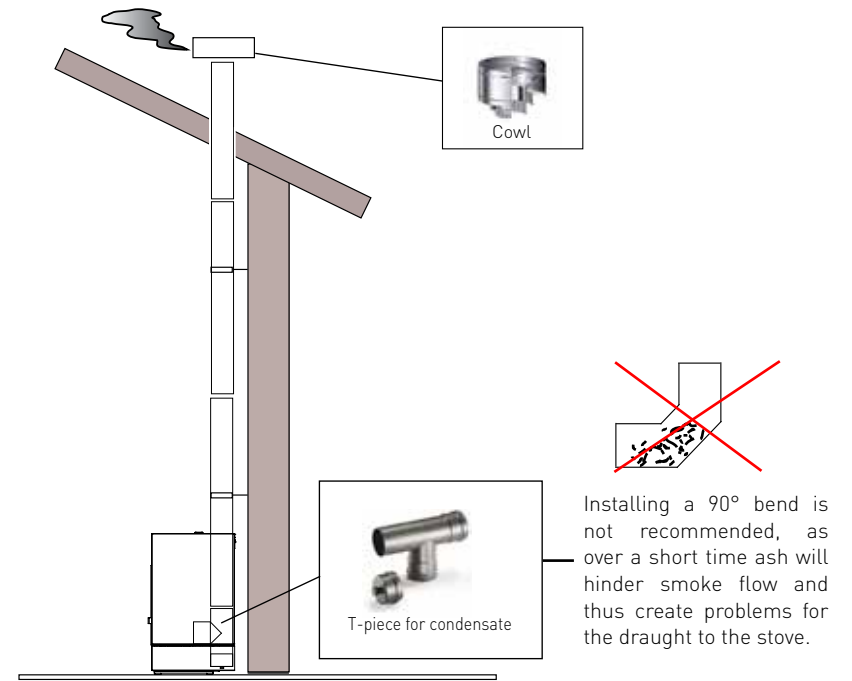
**Examples of chimney installations:**

**Chimney installation, Example 1**



In this case, the chimney must be insulated, as the whole of the chimney is outside the house. A T-piece with built-in inspection cover must be fitted at the base of the chimney.

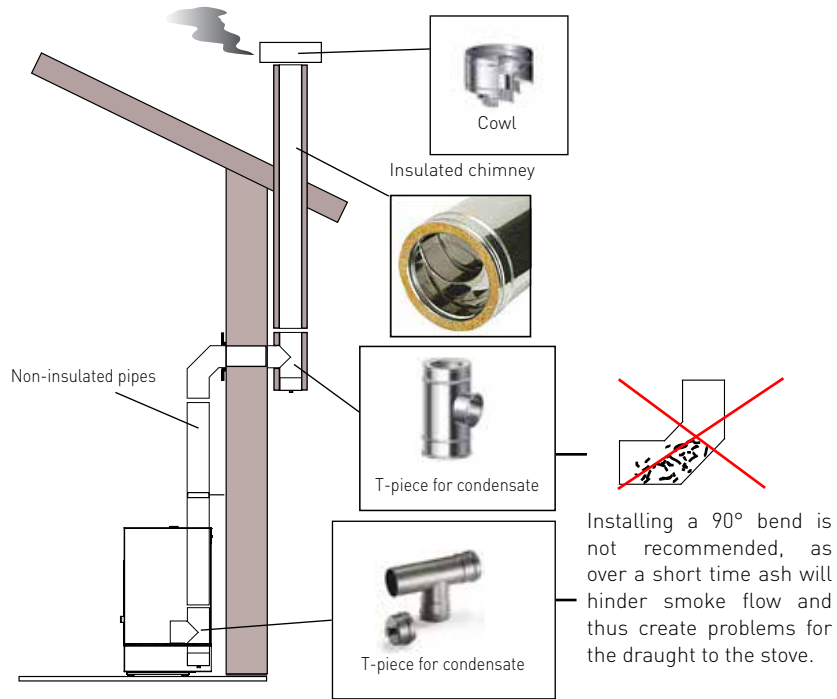
**Chimney installation, Example 2**



This type of installation requires an insulated chimney on the external part of the chimney. Internally, both insulated and uninsulated chimneys can be used. Note, however, the spacing to combustible material. If an insulated chimney is used, it and therefore the stove can be placed closer to a flammable wall.

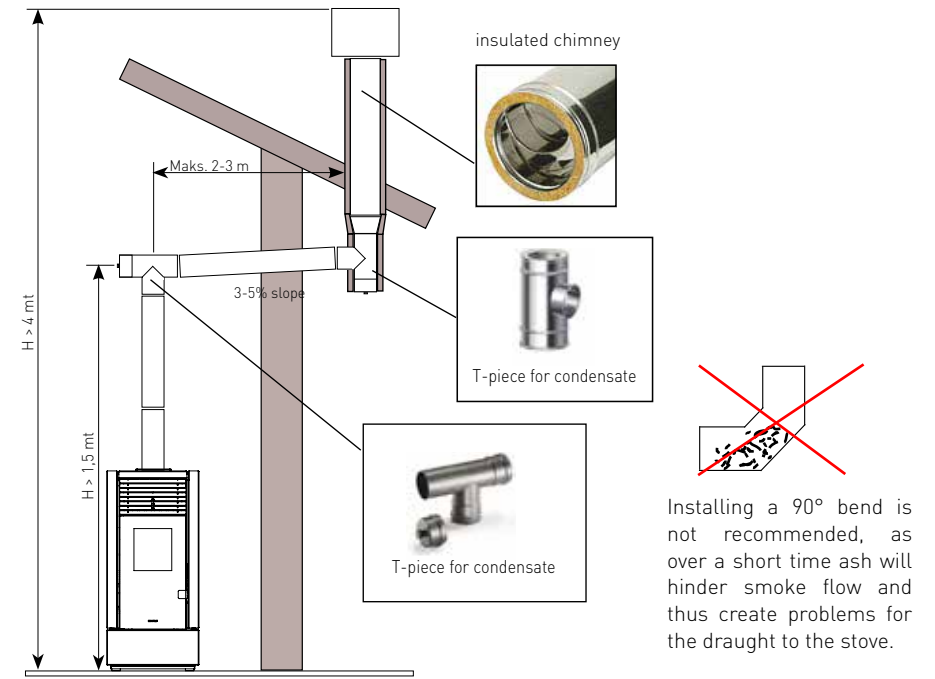
A T-piece with built-in inspection cover must be fitted at the base of the chimney.

### Chimney installation, Example 3



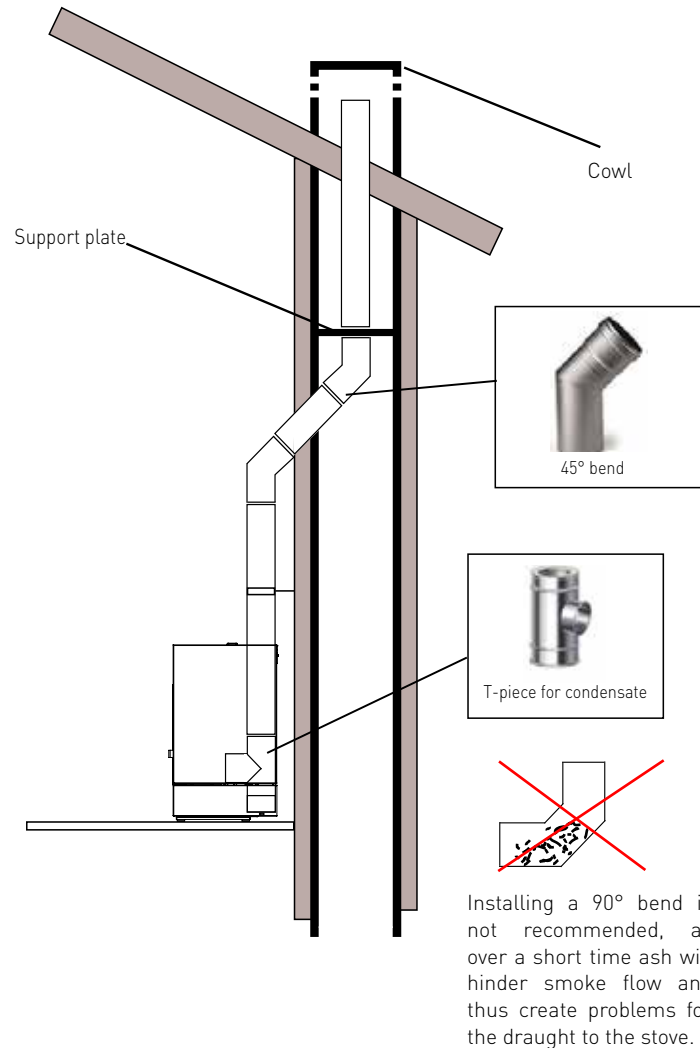
With this type of installation, there is no need for an insulated chimney inside the house. An insulated pipe is required for the external section. A T-piece with built-in inspection cover must be fitted at the base of the chimney inside the building.

### Chimney installation, Example 4



With this type of installation, there is no need for an insulated chimney inside the house. An insulated pipe is required for the external section. A T-piece with built-in inspection cover must be fitted at the base of the chimney inside the house, with another T-piece outside to allow this stretch to be inspected. Installing a 90° bend as the first piece is not recommended, as over a short time ash will hinder smoke flow and thus create problems for the draught to the stove.

## Chimney installation, Example 5



This type of installation does not need an insulated chimney, as part of the flue is fitted internally in the house, and the other part is inside an existing chimney. Remember to only use approved duct tubes.

A T-piece with built-in inspection cover must be fitted at the base of the chimney. Installing a 90° bend as the first piece is not recommended, as over a short time ash will hinder smoke flow and thus create problems for the draught to the stove. Note here the use of 2 no. 45° bends to ensure that ash drops into the T-piece with an inspection cover.

## 2.0 Stoking technique/ Use of your stove

### 2.1 General

The pellet stove must be installed in a dry environment. As it is controlled by an electronic printed circuit board, combustion is completely automatic and controlled.

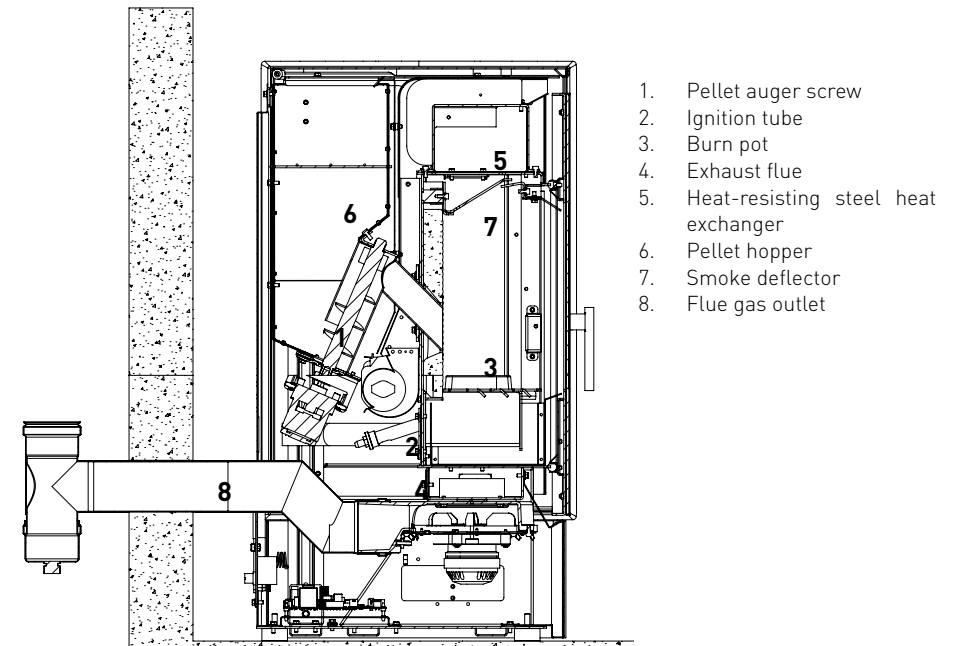
The printed circuit board regulates the lighting phases, 5 power steps, extinguishing and thus guarantee safe function.

The majority of the ash created during combustion of the pellets drops into the ash drawer via the burn pot used for combustion.

In any event, check the burn pot daily, as not all pellets are of a high standard and can therefore leave remnants that can be difficult to remove.

The glass is provided with a special self-cleaner. A slight greyish patina is, however, unavoidably formed on the glass after some hours' operation.

### 2.2 Construction of the pellet stove.



The drawing above shows the internal parts of a pellet stove. After filling the hopper (6), wood-pellets are transferred by the auger screw (1) to the burn pot (3). Ignition is initiated by the ignition tube (2), which heats the air.

## 2.3 Woodpellets

Woodpellets are made of sawdust and woodchips. The material may not contain substances such as glue, varnish or synthetic substances. The timber is subjected to high pressure during fabrication and extruded through a holed die. The high pressure heats the sawdust and activates the timber's natural binders. The pellets thus retain their shape without added binders. The calorific value of the pellets varies with the type of timber and can exceed that of natural timber by one and a half to two times. The cylindrical timber pellets have a diameter of 6 mm and a variable length between 10 and 30 mm.

The density of the pellets is approx. 650 kg/m<sup>3</sup>

Due to their low moisture content (8-10 %), they have a high energy content.

Timber pellets must in all cases be transported and stored dry. On contact with moisture, they swell and become unusable.

The most important European quality certifications for timber (white) pellets are DIN 51 735 and Ö-norm M7135. They guarantee that the following is complied with:

Length	10 mm.
Diameter	6 mm.
Specific gravity	650 kg/m <sup>3</sup>
Calorific value	4.9 Kwh/kg
Residual moisture content	6-10%
Ash content	below 1.5 %

## 2.4 Safety equipment

The pellet stove is provided with the most modern safety systems, such that in the event of a fault in one of individual parts or in the flue, the stove or habitable room cannot come to harm. In all cases, the pellet feed will immediately stop if a problem arises and extinguishing is activated.

The associated alarm will be shown on the display. Further details are given in the chapter about alarms.

Open never the lid when the pellet stove is operating. FIRE HAZARD!!!

The pellet stove may not be used with the lid open or with damaged glass. FIRE HAZARD!!! When the pellet stove is working, the surfaces, glass, handle and pipes become very hot. Therefore, you should only touch these parts when lit using appropriate protective wear.

Do not light the pellet stove without first having completed the daily inspection, as described in chapter on MAINTENANCE these instructions.

Never dry clothing on the stove. Any clothes horses and the like be kept at an appropriate distance. FIRE HAZARD!!!

Comply carefully with the maintenance program.

Do not switch off the pellet stove by cutting off the power supply. Always use P3.

Do not clean the stove before it and the ash have entirely cooled down.

The pellet stove must only be supplied with quality pellets with a diameter of 6 mm, as specified in the respective chapter.

The pellet stove will not function with ordinary timber.

The pellet stove must not be used as an incinerator.



## 2.5 Description of the controls



- P1 : Button to decrease general values
- P2 : Button to increase general values
- P3 : On/Off button
- P4 : Button to change ambient temperature
- P5 : Button to change operating power
- P6 : Pellets set button to change
- P7 : Multifunction button

## 2.6 Description of the menus

The stove has various functions, available in his individual programming menus. Some of these menus are accessible by the user, others are protected by a password and accessible only by the Technical Assistance Centre (C.A.T.).

The menus are as follows:

1. CLOCK SETTING Menu
2. CHRONOTHERMOSTAT SET Menu
3. LANGUAGE Menu
4. SEE SETTINGS Menu
5. STOVE STATUS Menu
6. WORKING HOURS Menu
7. DATA BASE Menu (protected by a password)
8. ZERO SET HOURS Menu (protected by a password)
9. FACTORY SETTING Menu (protected by a password)
10. RECEIPT SELECTION Menu (protected by a password)

### MENU 01 SETTING THE CLOCK (CLOCK SETTING MENU)

To set the clock, proceed as follows:

1. Remove and reset the electric supply of the stove using the general switch on the back.
2. The display will show FINAL CLEANING and then OFF.
3. Keep the P7 button pressed, CLOCK SET MENU will appear and confirm with the button P7.
4. The display will show DAY CLOCK: with buttons P1 and P2 set the current day (01 = monday, 02 = tuesday and so on). Confirm with button P7.
5. TIME CLOCK will appear on the display and the current time will be shown: with buttons P1 and P2 set the current time and confirm with button P7.
6. MINUTES CLOCK will appear on the display; set the minutes with buttons P1 and P2. Confirming with key P7 you return automatically to the 01 SET CLOCK MENU.

### MENU 02 CHRONOTHERMOSTAT SET MENU

With the chronothermostat function, switching on and off the stove for each day of the week can be programmed in two independent time intervals (PROGRAMME 1 and PROGRAMME 2). To enter this menu, proceed as follows:

1. Keep button P7 pressed, CLOCK SETTING MENU will appear.
2. Press button P1 (once): the display will show 02 CHRONOTHERMOSTAT SETTING MENU.
3. Access with button P7. the display will show the desired screen.



If this black segment is not lit up on the display corresponding with the symbol of the clock, it will however be possible to programme. To activate it, please see the chapter on setting the current day (CLOCK SETTING MENU), as the value must be other than OFF.

Description of the text strings:

Description	Adjustable values
START PROG-1	From OFF to 23:50 in 10 minute steps
STOP PROG-1	From OFF to 23:50 in 10 minute steps
DAY PROG-1	Between On/Off for days 1 to 7 (Monday to Sunday)
POWER PROG-1	From 1 to 5
TEMP ROOM PROG-2	From 7° to MAn (MAn means that the sensors is put out of action)
START PROG-2	From OFF to 23:50 in 10 minute steps
STOP PROG-2	From OFF to 23:50 in 10 minute steps
DAY PROG-2	Between On/Off for days 1 to 7 (Monday to Sunday)
POWER PROG-2	From 1 to 5
TEMP ROOM PROG-2	From 7° to MAn (MAn means that the sensors is put out of action)
START PROG	This parameter shows the time of ignition
STOP PROG	This parameter shows the time of extinguishing (must be no less than 60 minutes from start).
DAY PROG	This parameter is used to set the days on which the selected programme is active. To set this parameter the following procedure must be followed: Use key 5 to set the required day (days are 1, 2, etc.) and use key 4 to select the value ON OFF: If OFF is selected, the programming selected will not be activated on the day previously selected. If ON is selected, the programming will be activated on the day selected.
POWER PROG	This parameter sets the power step at which the stove will start.
SET TEMP PROG	This parameter indicates the required room temperature.

**EXAMPLE:**

Let's suppose that we want the stove to go on at 6.00 a.m. and switched off at 8.30 a.m. (PROG 1), and to go on again at 4.00 p.m. and to go off again at 10.00 p.m. (PROG 2). The settings to be made will be as follows:



Display this screen as described in chapter 7.1.7. Set the time desired for PROG - 1 to go on with buttons P1 and P2. Press button P7 to confirm. In the case of error, press P7 to go back one step.



Set the time desired for PROGRAM 1 to go off with buttons P1 and P2. Press button P7 to confirm.

At this point the user decides that his programming will be active on specific days of the week such as Monday and Wednesday, while it is de-activated on all other days.

The settings to be made will be as follows:



Set the day on which we want PROG 1 to be active or not active with button P2 (in this case 1, i.e. Monday). At this point, set the value on/off with button P1 which activates/deactivates PROG -1(in this case ON, that is programming on).  
SUMMARIZING, ON MONDAY THE STOVE WILL SWITCH ON AT 6.00 A.M. AND SWITCH OFF AT 8.30 A.M.



On tuesday the stove will not be switched on



On Wednesday the stove will switch on at 6.00 a.m. and switch off at 8.30 a.m.



On Thursday, the pellet stove is not switched on



On Friday, the pellet stove is not switched on



On Saturday, the pellet stove is not switched on



On Sunday, the pellet stove is not switched on

Confirm with key 7 to go on to the next screen. At this point select the power of PROG - 1.



Set the desired power for PROG - 1 with buttons P1 and P2. Confirm with P7

After selecting the power you can select the room temperature you want in that room, irrespective of the one set in the room set during manual running. As soon as the room temperature reaches the set value, the stove goes on to MODULATE or COMFORT CLIMATE (if activated).



Use keys P1 and P2 to set the required temperature. Press P7 to confirm.

PROGRAMME 1 is now completed.

Perform the same programming for PROGRAMME 2 with other parameter values. If you do not want to use the other PROGRAMME, check that all days are set to "OFF" under DAY PROG-2 and exit the menu by pressing key 3 twice.

**IMPORTANT!**  
**WHEN THE TIMER FUNCTION IS USED, YOU MUST REGULARLY CHECK THAT THE BURN POT IS CLEAN, SO THAT AUTOMATIC IGNITION AND COMBUSTION WORK CORRECTLY**

### MENU 03 SETTING THE LANGUAGE (LANGUAGE MENU)

To set the language, proceed as follows:

1. Remove and reset the electricity supply of the stove using the general switch on the back (see figure on page 35).
2. The display will show FINAL CLEANING and then OFF.
3. Keep button P7 pressed, CLOCK SETTING MENU will appear.
4. Press button P1 2 times: the display will show LANGUAGE MENU.
5. Access with button P7. the display will show the language selected.
6. With buttons P1 and P2, select the language desired.
7. Confirming with key P7 you return automatically to the 03 SET LANGUAGE MENU.

**The availability of languages may vary depending on the type of version of the FIRMWARE.**

### MENU 04 SEE SETTINGS MENU

In this menu you can check the values of the parameters set in the control unit. This menu is used by the T.A.C. (Technical Assistance Centre) to understand which parameters are set in the machine, to find any changes in order to improve how the thermal stove works.

To enter this menu, proceed as follows:

1. Keep button P7 pressed, CLOCK SETTING MENU will appear.
2. Press button P1 3 times: the display will show 04 SEE CALIBRATIONS MENU.
3. Access with button P7. the display will show the desired screen.
4. Scroll using the button P7 to display the parameters set. Press P6 to return to the previous parameter.
5. Scrolling as far as the last parameter you return automatically to the 04 SEE SETTINGS MENU.



### MENU 05 STOVE STATUS MENU

In this menu, you can check the correct functioning of the most important components of the pellet stove and some values which distinguish its correct functioning. To enter this menu, proceed as follows:

1. Keep button P7 pressed, CLOCK SETTING MENU will appear.
2. Press button P1 4 times: the display will show STOVE STATUS MENU.
3. Access with button P7. the display will show the desired screen.

This menu is used both by the T.A.C. (Technical Assistance Centre ) to identify a fault in the stove and by private individuals for operating the screw manually after loading pellet into the hopper.

## MENU 06 WORKING HOURS MENU

The WORKING HOURS Menu shows the total hours of work by the stove. In some cases, the working hours may not be zeroed. i.e.

numbers similar to 5000/15000/25000 may be shown; the technician will zero set these numbers when lighting the stove for the first time.

This does not mean that the stove has worked for all those hours. it is only a setting given by the programme during the first inspections, before the stoves are packaged and sent.

To enter this menu, proceed as follows:

1. Keep button P7 pressed, CLOCK SETTING MENU will appear.
2. Press button P1 6 times: the display will show WORKING HOURS MENU.
3. Access with button P7. the display will show the desired screen.
4. Confirming with key P7 you return automatically to the 06 WORKING HOURS MENU.

### Menus with password protection

The last four menus (MENU 07-10) are password protected and may only be used by authorized personnel

**IMPORTANT!**  
**THE GUARANTEE IS VOID IF YOU OBTAIN ACCESS TO PASSWORD PROTECTED MENUS OR PASS ACCESS CODES TO OTHERS**

## 2.7 Functions and operation of your stove

### Modulation

During the working phase, the aim of the stove is to reach the ambient temperature set; when the setting is reached, the stove will function in MODULATION WORK mode. During this phase, consumption of the fuel will be minimal and the ambient fan will function at minimum power.

### Modification of operating power

To modify the working power, press button P5 to enter the appropriate menu and with buttons P1 and P2 set the desired power from 1 to 5. By increasing the power, the consumption of pellets and the speed of the exchanger fan increase. The power setting cannot be modified in the MODULATION WORK phase.

### COMFORT CLIMATE MODE

To access this function, press P4 for four seconds.

When room temperature is reached, the electronic board reduces pellet consumption to the minimum activating the modulation phase, after which the stove checks if this temperature is maintained for a pre-established period of time and if this happens, it passes automatically to ECO STOP (the stove goes out).



To activate comfort climate press P4 for four seconds. Then press P1 or P2 to increase or decrease the value (see below).



The value set (in this case 2) has activated the Comfort Climate function.

FUNCTIONING:

The value sets the temperature the stove goes back on again.

EXAMPLE:

- room temperature set at 21°C
- Comfort Climate value set at 2

With this setting, the stove will switch off when 21°C is reached and will be switched back on when the room temperature is 19°C (21°C - 2 = 19).

The following strings will appear in sequence on the display:



The modulation phase is reached, as the set room temperature has been reached. **If the temperature is maintained for about 4 minutes, the stove will activate the switching off phase.**



After the switching off phase, the display will show ECO STOP.

The stove will remain in this state until the temperature drops to 19°C and only then will the ignition phase be re-started.

**NOTE: The stove can turn off and on many times during the day. This will mean more wear on the ignition tube. The ignition tube is not covered by the guarantee!**

### Modifying room temperature setting

The modes of functioning of the stove with the ambient thermostat activated can be divided into two types:

- ambient thermostat included in the remote control
- Comfort Climate mode

To access the menu press P4, and set the temperature using keys P1 and P2.

### Automatic loading of auger screw

To automatically load the screw (when the stove is new the loading screw is empty), proceed as follows:

1. Remove and reset the electric supply of the stove using the general switch on the back.
2. The display will show FINAL CLEANING and then OFF.
3. Press button P7, CLOCK SETTING MENU will appear.
4. Press button P6: "SCREW 0" will appear.



The auger screw is idle

5. Press button P2 to activate and P1 to deactivate the screw.



The auger screw is activated

6. Press button P3 to return to the main menu.

Repeat the operation several times until you can see the pellets fall into the fire pot.

**N.B.: This operation can be performed only if the stove is OFF.**

**IMPORTANT!**  
**ONCE THE AUGER SCREW HAS BEEN FILLED, THE BURN POT MUST BE EMPTIED BEFORE THE PELLET STOVE IS TURNED ON.**

### Lighting the pellet stove for the first time

Before the pellet stove turned on, the following procedure must be followed:

1. Check that the system is connected to a chimney approved by the chimney sweep.
2. Plug the power cable into the socket.
3. Set the switch behind the stove to 1.
4. Fill the pellet hopper with pellets that meet the quality requirements (see page 14)
5. Fill the auger screw as described in "Automatic loading of the auger screw"
6. Press key P3 for 3 seconds.

The pellet stove enters the ignition phase.

The display shows the following texts:

- START
- AWAIT FOR FLAME
- FLAME PRESENT
- WORK

During operation, the following settings must be checked:

- SETTING POWER STEP (see page 23)
- SETTING ROOM TEMPERATURE (see page 24)

### Overview of operation phases

PHASES	DESCRIPTIONS
<b>FINAL CLEANING</b>	The pellet stove is in the extinguishing phase, the cooling phase has not yet completed.
<b>LIGHT</b>	The ignition phase has started. Pellets are being loaded into the burn pot.
<b>AWAIT FOR FLAME</b>	The ignition tube is about to light the pellets.
<b>FLAME PRESENT</b>	The flame in the burn pot is strong.
<b>WORK</b>	The pellet stove has completed the ignition phase, the power step can now be changed.
<b>MODULATION WORKING</b>	The set value of room temperature has been reached.
<b>ECO STOP</b>	The climate comfort function is activated, the set temperature has been reached. The pellet stove has been extinguished.
<b>T ON</b>	The room temperature has been interrupted
<b>AWAITING/ RESTART/ COOLING</b>	The pellet stove is in a cooling phase, waiting for the flue gas temperature to cool down. COOLING - after which it will restart itself.
<b>HOT SMOKE</b>	The pellet stove has exceeded the maximum flue gas temperature and will try to reduce it automatically by changing the power step to P1.
<b>OFF</b>	The pellet stove is extinguished.

### How to associate the remote control to the stove

All input stoves are fitted with remote-control, radio-wave handsets and a receiver located on the back side of the stove.

Sometimes, due to interference from other electrical household appliances (microwave ovens, satellite decoders, mobile phones, cbs, .... ) the connection between the stove and the handset may be interrupted (no field). The following operations must be carried out to reinstate the connection:

- Switch the stove off.
- Unplug the power lead.
- Press the triangle keys 1 and 2 on the handset together for about 3 seconds.
- Using triangle key 2, select the frequency unit to be loaded (select unit 0 , 1 , 2 , 3 ).
- Reconnect the electricity by plugging in the power lead.
- Press the red button.

If the operation is successful, UNIT LOADED 0, 1, 2, 3 will appear on the handset.

The remote control uses 2 AAA batteries.

For battery replacement, remove the cover behind the remote control and remove the used batteries and insert new. Put the cover back in place again.

### Recommendations

- Turn off the pellet stove in the event of failure or poor function using key P3.
- Do not add pellets to the burn pot by hand.
- Accumulations of unburnt pellets in and below the burn pot after an unsuccessful attempt at lighting must be removed, before attempting re-lighting.
- Never add fuel other than woodpellets to the pellet hopper and burn pot.
- The pellet stove may only turned on using the automatic ignition system.

**IMPORTANT!**  
**SURFACES OF THE STOVE BECOME HOT DURING OPERATION! THEREFORE ALWAYS WEAR GLOVES TO TOUCH IT, FOR EXAMPLE WHEN FILLING THE PELLET HOPPER.**



## 3.0 Regular maintenance of the stove

### 3.1 Cleaning

To ensure optimal function and safety of your pellet stove, regular maintenance and cleaning are needed.

Before doing this, ensure that:

- All parts of the pellet stove have cooled down
- Embers are extinguished and the ash is completely cold
- The main switch on the pellet stove is set to 0.

Unplug the power cable to prevent unintentional power supply.

**IMPORTANT!**  
**OBSERVE CAREFULLY THE FOLLOWING GUIDELINES FOR CLEANING! LACK OF MAINTENANCE CAN LEAD TO FUNCTIONAL PROBLEMS FOR THE PELLET STOVE**

### Overview of cleaning

Parts/ frequency	Daily	2-3 days	30 days	60-90 days	Each season
Burn pot (p.29)		•			
Ash drawer (p.29)		•			
Glass pane (p.33)		•			
Smoke baffle (p.30)		•			
Flue (p.31)				•	
Glass fibre rope (p.33)					•
Chimney (p.7)					•
Firebox (p.30)		•			
Vacuum cleaning of pellet hopper (p.33)			•		

### Cleaning of surfaces

Use a cloth wrung in water or mild soapy water to cleaning the enamelled metal parts. Use of aggressive cleaning materials or solvents damage the surfaces of the pellet stove.

### Cleaning burn pot before each ignition

Check that the burn pot, in which combustion takes place, is clean and that slag and remnants are not clogging the holes in the base of the burn pot. This guarantees optimal combustion in the pellet stove. this in turn prevents any overheating, which can lead to changes in colour of the varnish or spalling of the lid, and even ignition failure. The burn pot can be turned incorrectly. It is important that the hole for the ignition tube faces the ignition tube and lies flat.

**Remember also to clean below the burn pot.**

Only a clean and intact burn pot can ensure problem-free functioning of the pellet stove. Deposits can form during operation, and must be removed immediately. It is easy to see when the burn pot needs to be cleaned! It only takes a glance.



Clean burn pot with all holes visible



Burn pot with holes clogged with ash. Must be cleaned

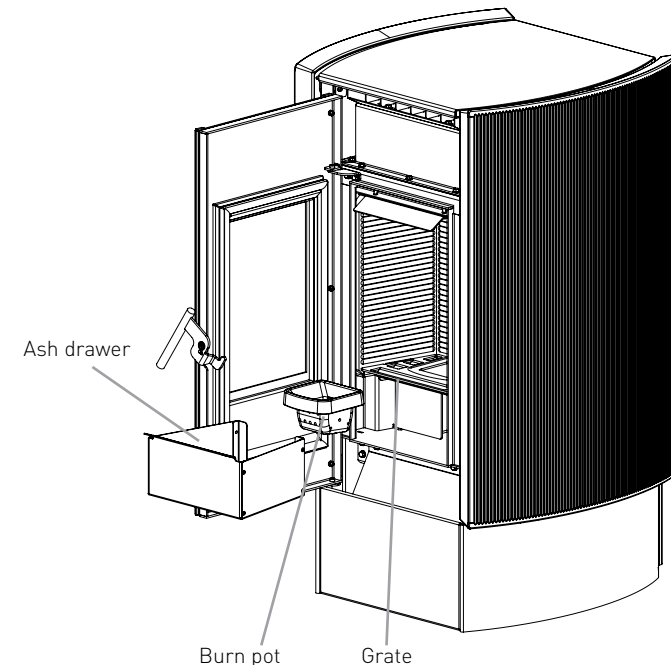
It must be cleaned daily before each manual start up. For minor cleaning, the burn pot can remain in the pellet stove, but if the residues are difficult to remove, the burn pot must be removed and the slag scraped off.

The quantity and consistency of ash depends on the quality of the pellets used. Even a new batch of the same make of pellets can show differences during combustion, leading to more or less ash.

With correctly daily cleaning, the pellet stove can operate and burn optimally, thereby preventing faults which in the long run can require action by a technician to restore optimal functioning.

### Emptying the ash drawer

The ash drawer must be emptied after 2-3 days' operation, dependent on usage and the quality of the pellets. Long usage and poor pellet quality lead to more ash.



### Cleaning the smoke baffle

Long-term use of the pellet stove can lead to soot and ash deposits on the upper face of the smoke baffle.

It is very individual how much of a soot layer is formed and how quickly this occurs. If combustion is not adjusted correctly or if poor quality pellets are used, soot can accumulate quickly. The smoke baffle has an oblong hole at the bottom, through which ash and soot can drop into the firebox and thus reduce ash and soot deposits.

### Cleaning the refractory stones in the firebox

The pellet stove firebox consists of refractory stones made of vermiculite. The stones are characterised by high heat resistance and have outstanding insulation properties.

The appearance of the stones says much about the combustion: pale and soot-free stones indicate good combustion, whereas dark and dirty stones indicate poor combustion. The refractory stones do not need particular maintenance. They only need to be brushed down with a paintbrush if you want to remove ash that has accumulated during combustion.

We do not recommend:

- using abrasive sponges or similar to remove more resistant slag as it can damage the thickness of the stones and create critical breakage points.
- vacuum cleaning directly with the vacuum cleaner hose.
- using a wet cloth to clean the stones.

The stones are heat-resisting but not impact-resisting. Handle the stones carefully if they need to be moved.

The stones can become slightly crazed after a few hours. This is completely normal, as the flames scrape some micro-grooves in the stones without damaging them.

The stones can last a very long time, if care is taken during cleaning.

**The pellet stove is a heating appliance for solid fuel and it is recommended that it is inspected and serviced by qualified persons no less than once a year at the beginning of the season. The aim of this maintenance is to check and ensure that all components function optimally.**

**We recommended taking out an annual contract for maintenance of the product with the installer/ dealer/ chimney sweep.**

### Cleaning the flue

Long-term use of the pellet stove can lead to soot and ash deposits in the flues of the stove. These must be removed at suitable intervals.

The chimney sweep is obliged to clean the chimney, but the flues inside the pellet stove itself will not be cleaned unless a specific agreement is made.

### Method

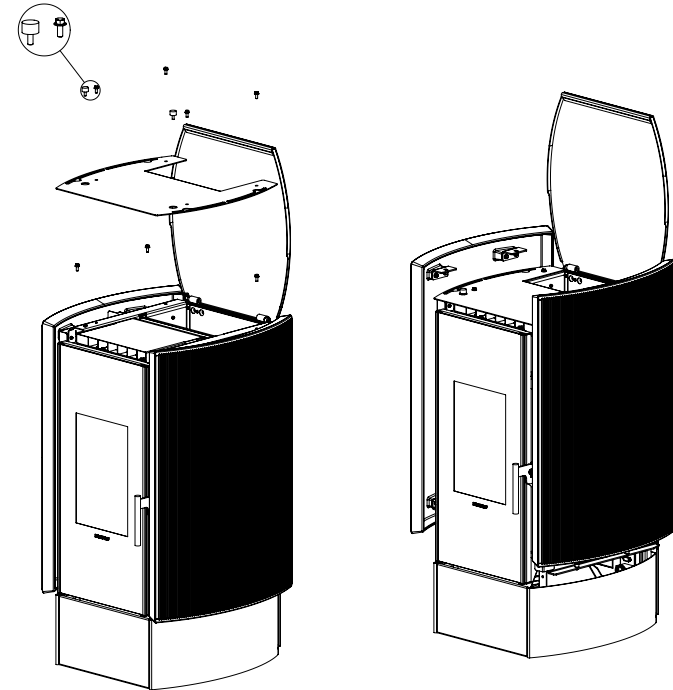
Ensure that the stove is extinguished and complete cold. Unplug the power cable from the socket. The pellet stove flues can be accessed from 3 points:

- through the right hand inspection cover
- through the left hand inspection cover
- from the chimney bottom plate (either a smoke door or removable bottom plug on the T piece)

Having gained access from these points, soot can be removed using a brush and vacuum cleaner.

### Access to inspection cover

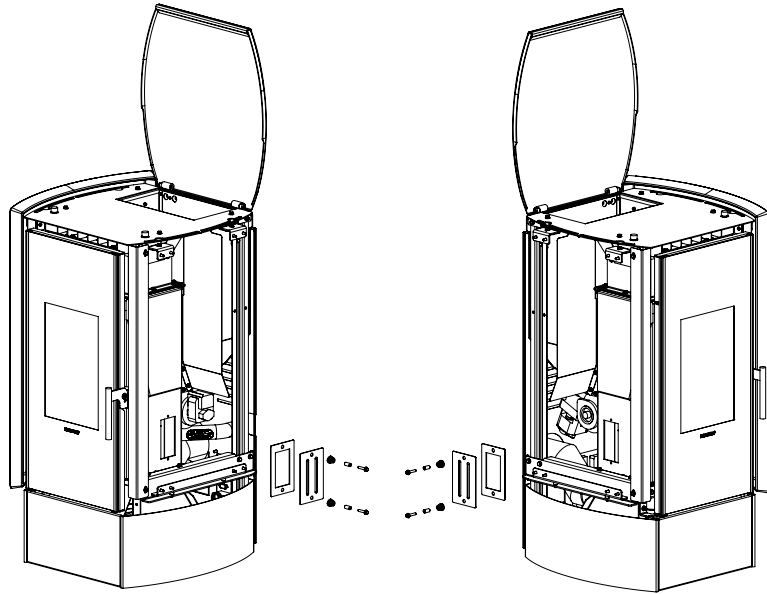
Raise the lid of the pellet hopper. Loosen the 4 bolts that fix the side panels to the stove. The panels can then be lifted off.





The flues are accessed by loosening the sprung bolts that keep the inspection covers in place. Remove the inspection covers and washers.

Access to inspection holes, right and left hand sides



Remove soot from the uncovered inspection holes to the flues. On completion of cleaning, re-assemble the stove. When re-fitting the inspection covers, new washers must be fitted to ensure a good seal.

#### **Access to flue at smoke outlet stub.**

Using a chimney system terminated by a T-piece with a bottom stopper and possibly a flue cleaning flap, it is possible to brush and vacuum clean the flue from the outlet stub.

#### **Glass fibre gasket rope to doors**

In time, the gaskets in the doors will become worn and should be replaced as necessary to avoid uncontrolled combustion. Use original Morsø sealing rope.

#### **Glass pane**

Optimal combustion leads to no, or only minimal, soot on the ceramic glass. If the glass becomes heavily sooted due to faulty operation/ settings, it can easily be removed using Morsø Glass Cleaner.

The glass must be cold when this cleaning takes place.

A grey transparent film can develop over time on the inside of a the glass, which cannot be removed.

**We recommended the use of Morsø Glass Cleaner.**

#### **Vacuum cleaning the pellet hopper**

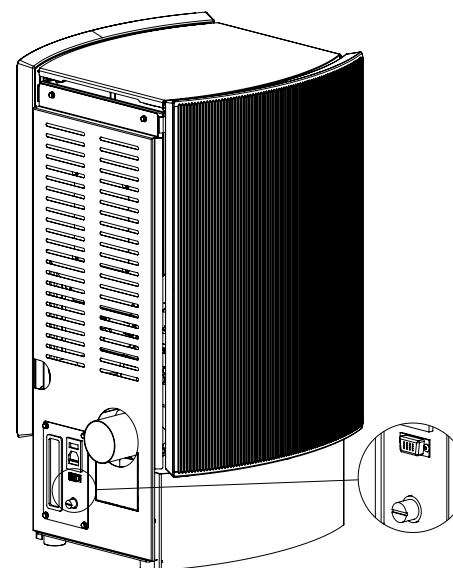
About once a month, the pellet hopper should be vacuum cleaned to remove wood dust.

### 3.2 Alarm descriptions

Alarm	Reason	Remedy
AL01 BLACKOUT	Power cut during the operating phase	Press key 3 to turn off and on the pellet stove again (check electrical connection). Refer to your Morsø dealer if the problem persists.
AL02 ALARM SMOKE SENSOR	The smoke sensor is not functioning correctly	Refer to your Morsø dealer
AL03 ALARM LOW FLAME	The pellet hopper is empty/ poor pellets/ chimney defect	Check that there are pellets in the hopper
AL04 DEFECTIVE SMOKE EXTRACTOR	The rev counter on the smoke extractor is not functioning or is not connected correctly. The fan is blocked.	Refer to your Morsø dealer
AL05 NO IGNITION	The pellet hopper is empty.	Check that there are pellets in the hopper.
	Defective setting of timber pellets and draught in the ignition phase.	Refer to your Morsø dealer
	Ignition for ignition is defective or not in position	Refer to your Morsø dealer
AL06 NO PELLETS	The pellet hopper is empty	Check that there are pellets in the hopper.
	The auger screw is not transferring pellets	Empty the pellet hopper to check whether an object has fallen into it and preventing correct operation of the auger screw.
	Too few pellets or too high air supply	Refer to your Morsø dealer if the problem persists.
AL07 RESET THERMAL	Thermal sensor with manual connection/ reconnection is activated.	Reset thermal sensor by pressing the button behind the stove (see page 35)
	Convection fan is defective	Refer to your Morsø dealer
	Combustion in the burn pot is not optimal	Turn off the pellet stove, clean burn pot and adjust combustion

AL08 NO UNDER-PRESSURE	Combustion chamber dirty/ chimney blocked	Clean pellet stove/ pipes/ flues
AL12 FAULT RPM SMOKE	Flue gas fan running at at least 15 % less rpm than stated in the programme line	Refer to your Morsø dealer
ALARM STATUS SCREW	The auger screw is not supplying wood pellets	Refer to your Morsø dealer
HOT SMOKE (warning, not alarm)	Combustion is not optimal.	Turn off the pellet stove, clean the burn pot and adjust combustion
	Convection fan is defective	Refer to your Morsø dealer

Reset the alarm by pressing OK on the display. Repeat the ignition phase after the cooling phase.



Screw off the protective cap and press the button to reset the thermostat for thermal alarm. Repeat the ignition phase after the cooling phase

### 3.3 Information and problems

Please refer to your dealer or to the technical service centre for information or in the event of problems. These are the only people who can answer all queries or take direct action if necessary.

**IMPORTANT!**  
**THE STOVE MUST CLEANED BEFORE EACH REMEDIATION**

## SAFETY RULES

Great attention is paid during production of the Morsø pellet stove to each individual component to protect both the user and installer against any accidents. The authorised personnel are therefore required to be particularly aware of electrical continuity after any work on the pellet stove. The installation must be carried out by authorised personnel. The personnel must issue a declaration of conformity for the system to the purchaser. The purchaser must accept full responsibility for the final installation and the subsequent correct functioning of installed pellet stove. Account must also be taken of all national, regional, provincial and municipal laws and provisions applicable in the country in which the pellet stove is installed. Morsø has no liability in the event of failure to comply with such safety rules.

These Instructions for Use are an integral part of the product: ensure that they always accompany the pellet stove in the event of transfer to another owner or user, or if it is moved to another position. If the instructions are damaged or lost, request a new copy from your Morsø dealer.

- At the installation, the user must be informed that:

The pellet stove - especially its external surfaces - reach very high temperatures for touching during operation. Handle it carefully to avoid burns. The pellet stove is designed to function under any climatic conditions. **Under very unfavourable conditions (wind, frost) safety systems are activated to turn off the stove. If this occurs, your Morsø dealer must be contacted.**

Under no circumstances should you de-activate the safety systems.

This pellet stove must be used for the purposes for which it has expressly been produced. Never use the stove as an incinerator or for any other purpose that differs from that for which it has been produced.

Any contractual and non-contractual liability of the producer for injury to people, animals or objects due to defective installation, adjustment or maintenance errors or incorrect use are excluded.

No fuels other than timber (white) pellets may be used. Do not use not liquid lighter fuels. Check after removing packaging from the pellet stove that the contents are intact and complete. All electrical components which the pellet stove contains may only be replaced with original parts by an authorised technician.

The stove must be maintained no less than once a year, which should be arranged in time along with the technical service. Do not perform alterations to the pellet stove without permission.

For safety reasons, remember the following:

- Children or other unauthorised persons are prohibited from using the stove without assistance.
- Do not touch the stove if you have bare feet or wet body parts.
- Altering safety equipment or settings is prohibited without permission from Morsø

## 3.4 Guarantee conditions

Morsø thanks you for the trust you have shown in us by purchasing our pellet stove. As the purchaser, you are encouraged to:

- read the instructions for installation, use and maintenance of the pellet stove.
- read the following guarantee conditions.

The limited guarantee covers defects in production materials so long as the product has not suffered damage resulting from incorrect use, omission, incorrect connection, unlawful alterations or faulty installation.

The following are not covered by the guarantee:

- Vermiculite refractory stones
- the glass in the door
- fibre washers
- enamelling
- the burn pot
- the heating element
- any damage due to inappropriate installation and/or handling of the pellet stove and/or omissions by the user.

Use of poor quality timber pellets or any other material can lead damage to components of the pellet stove and thus to voiding of the guarantee for these components and of the manufacturer's liability.

You are therefore recommended to use pellets that comply with the requirements of the relevant chapter. All damage associated with transport is not recognised. It is therefore recommended that you check the goods thoroughly on receipt and immediately inform the dealer of any damage.

## 3.5 Liability

By supplying these Instructions for Use, Morsø is absolved of all civil or criminal liability for accidents due to failure to partially or fully comply with the instructions herein.

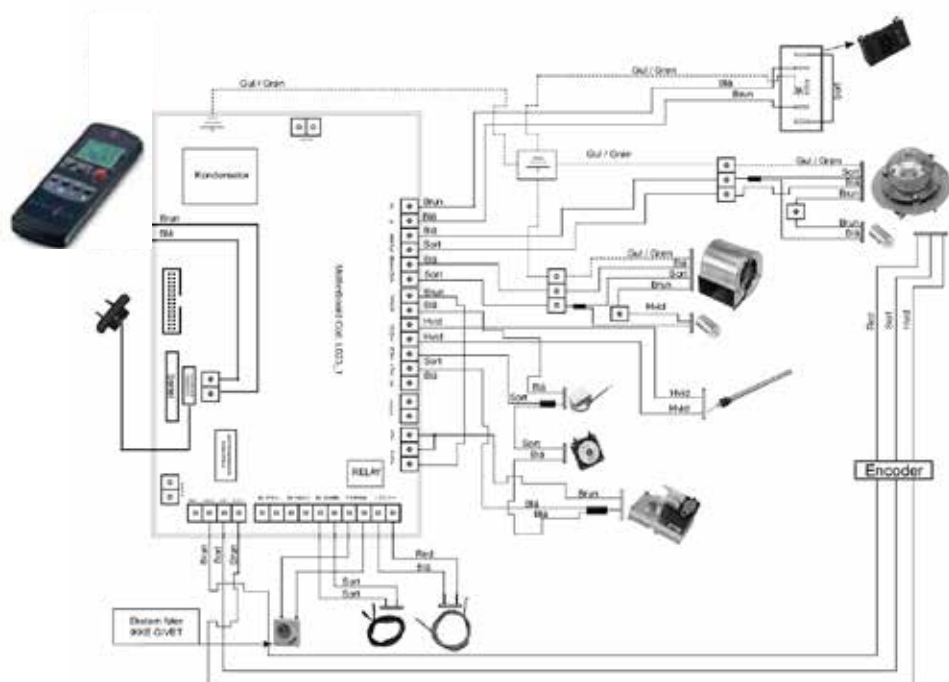
Morsø has no liability for incorrect use on the part of the user of the wood-burning stove, for alterations and/or unauthorised repairs and use of non-original spare parts. The producer disclaims all direct or indirect civil or criminal liability as a result of:

- Poor maintenance
- Lack of compliance with the instructions in these Instructions for Use
- Use not conforming with the safety rules
- Installation not in accordance with current provisions in the country concerned.
- Installation carried out by unqualified and untrained persons.
- Alterations and repairs which have not been authorised by the producer.
- Use of non-original spare parts.
- Extraordinary events.
- Unsuitable chimney conditions.

## Spare parts

Use only original spare parts. Do not wait for components to wear out before replacing them. Replace a worn component before it is entirely ruined to prevent accidents due to failure of the worn component.

## 3.7 Electrical diagram



## 4.0 Technical data

Stove model	Morsø P50/51
nominal operating power (kW)	6.8
Reduced operating power (kW)	3.0
CO emission (at 13 % O <sub>2</sub> ) (%), nominal operating power	0.014
CO emission (at 13 % O <sub>2</sub> ) (%), reduced operating power	0.020
Efficiency (%), nominal operating power	89
Efficiency (%), reduced operating power	90
Smoke draught, minimum (Pa.)	10
Fuel	Woodpellets, dia. 6 mm
Flue gas massflow (g/s)	5.1
Mean flue gas temperature in flue collar (°C)	208
Combustion air consumption (m <sup>3</sup> /h)	15
Power consumption during operation (W)	60Wh (power step 5)
nominal voltage (V)	230
nominal frequency (Hz)	50
Weight of P50 (kg)	140
Weight of P31 (kg)	110

All measurement data in accordance with test standard EN 14 785. Testing has been carried out by an accredited testing institution.

The Morsø P50/51 pellet stove is produced in accordance with these Directives:

- 89/106 CEE structural materials
- 73/23 CEE electrical safety
- 2006/42/CEE machines
- 2004/108 CEE electromagnetic compatibility
- 

and in accordance with the following standards:

- EN 14 785
- EN 60 335.1 EN 50 165
- EN 292 EN 294 EN 349
- EN 55 014.1 EN 61 000-3-2 EN 61 000-3-3
- EN 55 014.2

