



Operating Instructions Manual

PelIX 20 & 35 kW

Pellet Burner with External Auger



SAVE THESE INSTRUCTIONS

This manual is for the Home Owner. Important operating and maintenance instructions are included. Read, understand, and follow these instructions for safe operation. This operating manual must be kept near to the boiler for the party responsible for maintenance, use, and operation.

Gordic Environment AB



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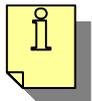
1. Safety Instructions

1.1 Warnings, Cautions, and Notes

The safety instructions in this manual use the following warnings and symbols:

 WARNING
Warning indicates a hazard which, if not avoided, could result in death or serious injury and / or property damage.

 CAUTION
Caution indicates a hazard which, if not avoided, might result in minor or moderate injury and property damage.



NOTE

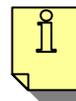
Note indicates a practice or convention that should be followed in order to avoid possible damage to the unit and / or its installed equipment. Also used to indicate information which will increase the operator's understanding of the unit and / or its installed equipment.

1.2 General

Read the safety instructions carefully before installation. Always follow the safety instructions during installation and during maintenance. Follow the safety instructions on the warning signs!

Installation, operation, service, and other work must be carried out by qualified personnel in accordance with local codes and regulations.

 WARNING
Always follow the instructions for operations and service.



NOTE

For personal and operational safety, use only spare parts which have been manufactured or approved by Gordic Environment AB. Use of non-Gordic spare parts will void the warranty.

 WARNING
Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid contact to skin and / or clothing. Young children should be carefully supervised when they are in the same room as the burner. Clothing and other flammable materials should not be placed on or near this unit.

1.3 Safety Instructions for Installation, Use, and Service

	WARNING
<p>The owner / user shall read and understand this manual before installation and operation of the burner. For proper function and to avoid accidents and damage, these instructions must be followed. Wrong handling and incorrect settings can result in injury and damage and / or malfunction of the equipment.</p>	

All plumbing work shall be done by certified and qualified personnel in accordance with local codes and regulations.

	WARNING
<p>There is high voltage inside the equipment.</p> <p>All electrical installation and service work shall be done by certified and qualified personnel in accordance with local codes and regulations. Do not perform electrical work unless you have the required qualifications. Perform a complete burner shutdown and disconnect the power supply prior to performing any work on the burner. Observe all guidelines with respect to installation, service, or cleaning.</p>	

It is absolutely forbidden to connect the burner directly to a wall socket. Always check with your local authorities with jurisdiction (AWJ) concerning plumbing and heating code requirements for pellet burner installations. PellIX requires that the burner's power supply must be controlled by a high limit (temp) manual reset device like the Honeywell L4006H1004 and a low water cut off (LWCO) device like the Taco LWCO LF.

The compressor, which is connected to self cleaning equipment, must be approved by a PellIX Authorized Installation Contractor. The boiler room, where the pellet plant is to be installed, the chimney, and the auxiliary equipment must be in compliance with local codes and regulations.



Connection of the main power supply shall be done by an authorized electrician according to the wiring diagram in the "PellIX 20 & 35 kW Pellet Burner with External Auger Installation Manual".

The burner casing must always be mounted when the burner is connected to the main power supply. Always make sure that the burner is disconnected (unplug the main power supply cable) before performing any cleaning or maintenance. Note that the power switch on the external control box does not disconnect the main power supply.

	WARNING	
<p>There are rotating parts inside the auger.</p> <p>Prior to performing any work on the auger or the pellet hopper, disconnect the power supply to the auger motor.</p>		



WARNING



There is a risk of burn from touching the equipment during operation.

The burner casing, burner body, flange, and flame trap pipe are hot surfaces during operation. Keep children away and do not touch the equipment during operation.

It is absolutely forbidden to open the boiler doors when the burner is running. Also be careful when opening the flame inspection port during operation.

Do not over fire. If any external parts start to glow, you are over firing. Reduce the pellet feed rate. Over firing will void the warranty.



WARNING



There is danger to life from flue gas poisoning.

Make sure there is adequate combustion air under all circumstances in the boiler room. If any equipment like exhaust fans, central vacuum systems, dryers, or air conditioning equipment is installed in the boiler room or adjacent areas make sure their installation does not produce negative air pressure or affects in any way the pellet burner operation. Make sure the boiler is connected to a chimney or vertical venting system in accordance with local codes and regulations. Each appliance pellet fired boiler must have its own flue and cannot be connected to a chimney flue serving any other appliance.



WARNING



There is risk of fire or explosion.

Make sure that no flammable or liquid materials are stored in the boiler room or vicinity of the boiler. Do not use chemicals or fluids to start the burner fire. Do not burn garbage, gasoline, naphtha, engine oil, or other materials.

All chimney sweeping shall be done by certified and qualified personnel in accordance with local codes and regulations.



CAUTION

Use only approved pellets as described in the section 1.10 Pellet Quality. Burning any other type of fuel voids the warranty.



WARNING



DO NOT install in a sleeping room.

DO NOT connect to any air distribution duct or system.

DO NOT terminate the vent in any enclosed or semi enclosed area, such as; carports, garage, attic, crawl space, under a sun deck or porch, narrow walkway or closed area, or any location that can build up a concentration of fumes such as a stairwell, covered breezeway etc.



CAUTION

Proper installation of this burner is necessary for safe and efficient operation. The burner must be connected to a boiler as the heating source. Installing this product improperly may result in a house fire and personal injury. Contact your local building inspector to obtain any necessary permits or inspection guidelines before installing the product.

Contact local building or fire officials about restrictions and installation inspection requirements in your area.

Contact your local authority (such as municipal building department, fire department, fire prevention bureau, etc.) to determine the need for a permit.

A working smoke detector is required and must be installed in the same room as the burner.

This installation must conform to local codes and regulations.

The structural integrity of the manufactured home floor, wall, and ceiling/roof must be maintained.

The PellIX burner is Not approved for installation in mobile homes.

1.4 Safety Guidelines for Self Cleaning

The maximum air pressure for the compressor's self cleaning feature is 8 Bar / 116 PSI.

The main cable to the compressor and the air supply hose should not be allowed to get in contact with any surfaces of a temperature over 158° F / 70° C.

Make sure that the compressor is disconnected from the burner before cleaning and maintenance.

Any interference or use of parts other than original spare parts provided only by PellIX or its authorized representative can result in danger for the end-user and release the supplier from all kinds of responsibility for the product.

This manual shall be kept intact during the lifetime of your PellIX burner.

1.5 Safety Systems



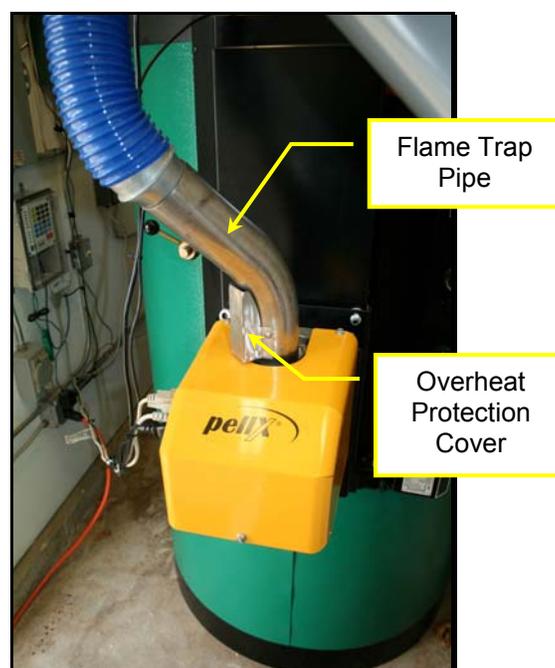
CAUTION

It is forbidden to tamper with the safety devices or disable their function.

The PellIX burner system is equipped with the following safety systems:

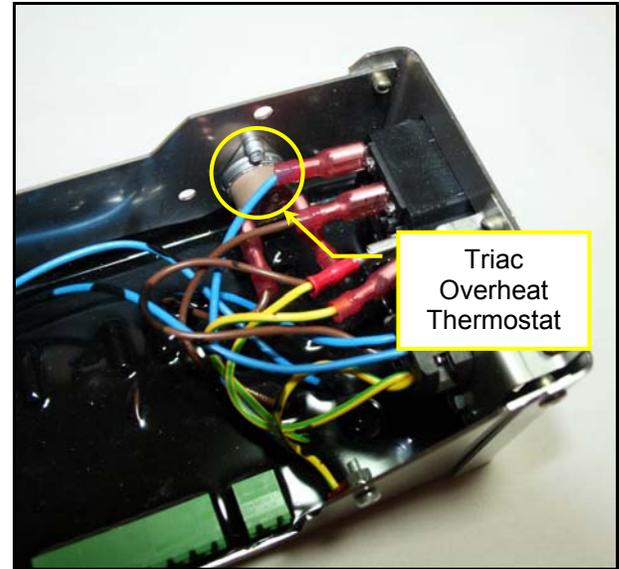
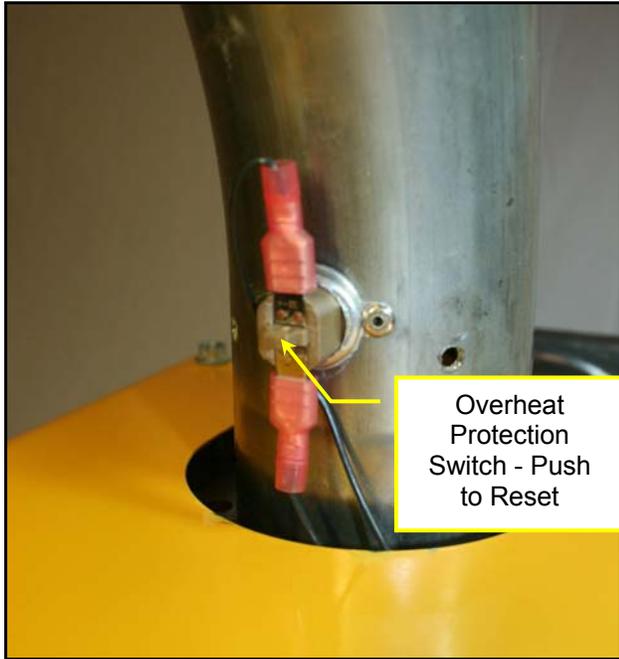
FLAME TRAP PIPE BETWEEN PELLETT AUGER AND BURNER

- The flame trap pipe prevents back-firing into the fuel hopper. The upper part of the flame trap pipe is a plastic hose that can melt.



**OVERHEAT PROTECTION (203° F / 95° C)
ON THE FLAME TRAP PIPE**

- Switches off the main power supply if the burner is overheated by a back-fire. The overheat protection cover must be mounted on the burner during operation.

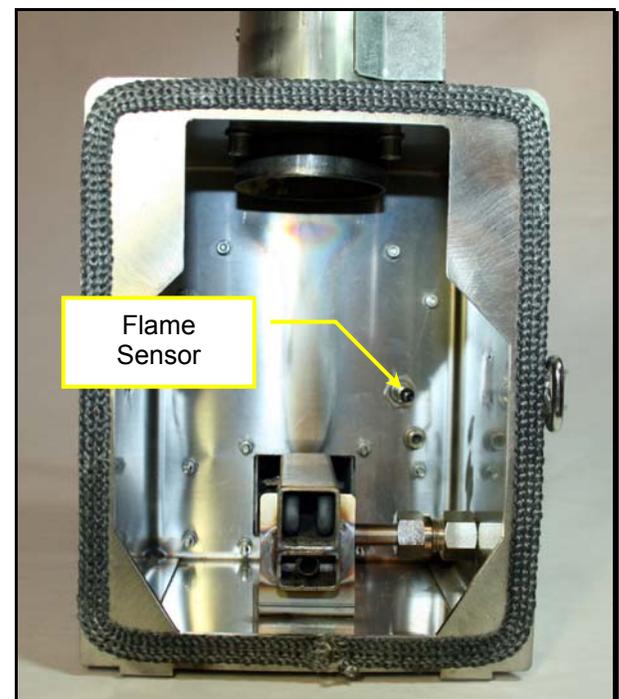


FLAME SENSOR

- The flame sensor checks that the unit is burning after the start sequence begins and during the operation mode. If the flame sensor does not see flame, the fuel feed stops and the burner is cooled down with maximum fan speed for a settled period of time before it stops. At a normal stop, the cooling down phase starts after the flame sensor does not see flame.

**OVERHEAT THERMOSTAT (158° F / 70° C)
ON THE TRIAC UNIT**

- If the electronic module (the Triac Unit) in the burner becomes exceptionally warm, the thermostat stops the feeding of pellets to the burner. When the fire goes out due to lack of fuel, the flame sensor gives a signal to the burner to make a controlled shut-down. The overheat thermostat is automatically reset when the temperature goes down to approximately 140° F / 60° C.



Safety Instructions



EXTRA SAFE MODE

- After a second flame sensor drop out during operation, a controlled shut-down of the burner is carried out. Once the flame sensor has stopped the burner, a new starting attempt is made after about 30 minutes. If the burner starts, it is only allowed to run with low effect fuel feed (65% of supplied) and at set **Fan High**. This operational mode reduces the temperature in the burner but also the efficiency. If the flame sensor is activated once again, restart is not allowed.

ELECTRICAL FUSES

- The burner is equipped with two main fuses. One is located on the main power inlet of the Triac Unit. The other is located on the main power inlet of the Control Box. Each fuse is a Slow Blow fuse 4A, Ø5x20 mm, type T4AH-250 V.

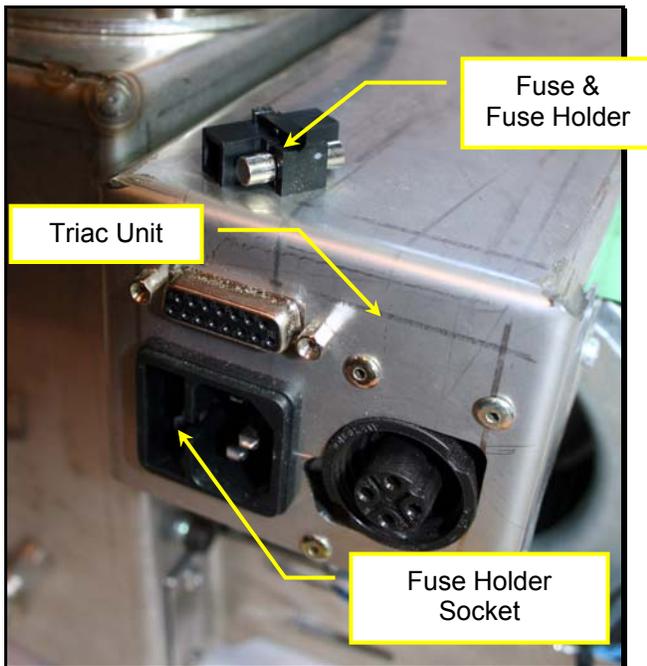
POWER INTERRUPTION

- After a power interruption, the control system records if the burner has stopped in a normal way. It moves then to the idle position or alternatively to the starting mode if there is a long power interruption. If the power interruption occurs during the burner's operation, the fan runs for a few minutes to burn residual pellets, if any, before the burner restarts normally again.



NOTE

The PellIX pellet burner must have ample clearance in accordance to local codes. Compliance with local codes and applicable clearance requirements must be determined by the owner / user and are not the responsibility of PellIX or its authorized representatives.



1.6 Compliance Standards Testing

The PellIX burner has been tested and listed to UL 391, ETLM 78-1, ASTM E-1509, CAN/CSA 366.1 by Guardian Fire Testing Labs, Inc.

1.7 Technical Data

Burner

	PellIX 20 kW	PellIX 35 kW
Heating Effect (Supplied)	13 - 25 kW / 44,382 - 85,350 BTU	30 - 40 kW / 102,420 - 136,560 BTU
Combustion Efficiency	Approximately 95%	Approximately 95%
Combustion Air (Used)	Approximately 30 - 40 m ³ / h	Approximately 40 - 60 m ³ / h
Power Supply	120 V 60 Hz	120 V 60 Hz
Electrical Effect (Ignition)	400 W	400 W
Electrical Effect (Operation)	40 W	40 W
Combustion Fan	Adjustable	Adjustable
Fuses (2)	4 AMP 5mm x 20mm slow blow fuses	4 AMP 5mm x 20mm slow blow fuses
Weight	15 kg / 33.07 lbs	16 kg / 35.27 lbs

Self Cleaning Compressor:

Pressure: 6 - 8 Bar / 87 - 116 PSI
 Minimum Recommended Pressure: 6 Bar / 87 PSI
 Minimum Tank volume: 3 liters / 0.79 gallons
 Air Pressure Connection Type: Cejn 320 (also Tema 1600, Rectus 25)

Solenoid Valves (2):

Electrical Connection: 120 V 60 Hz



NOTE

We recommend that a low sound level compressor be used.



NOTE

We recommend pellets that contain ash content of less than 1 weight-% and the lowest ash melting temperature (IT) of 2372° F / 1300° C.

1.8 Dimensions

Burner (mounted in mounting flange)

Outside The Boiler:

Depth: 15 - 3/8" / 38.99 cm
 Width: 8 - 7/8" / 22.50 cm
 Total height: 20 - 1/2" / 51.99 cm

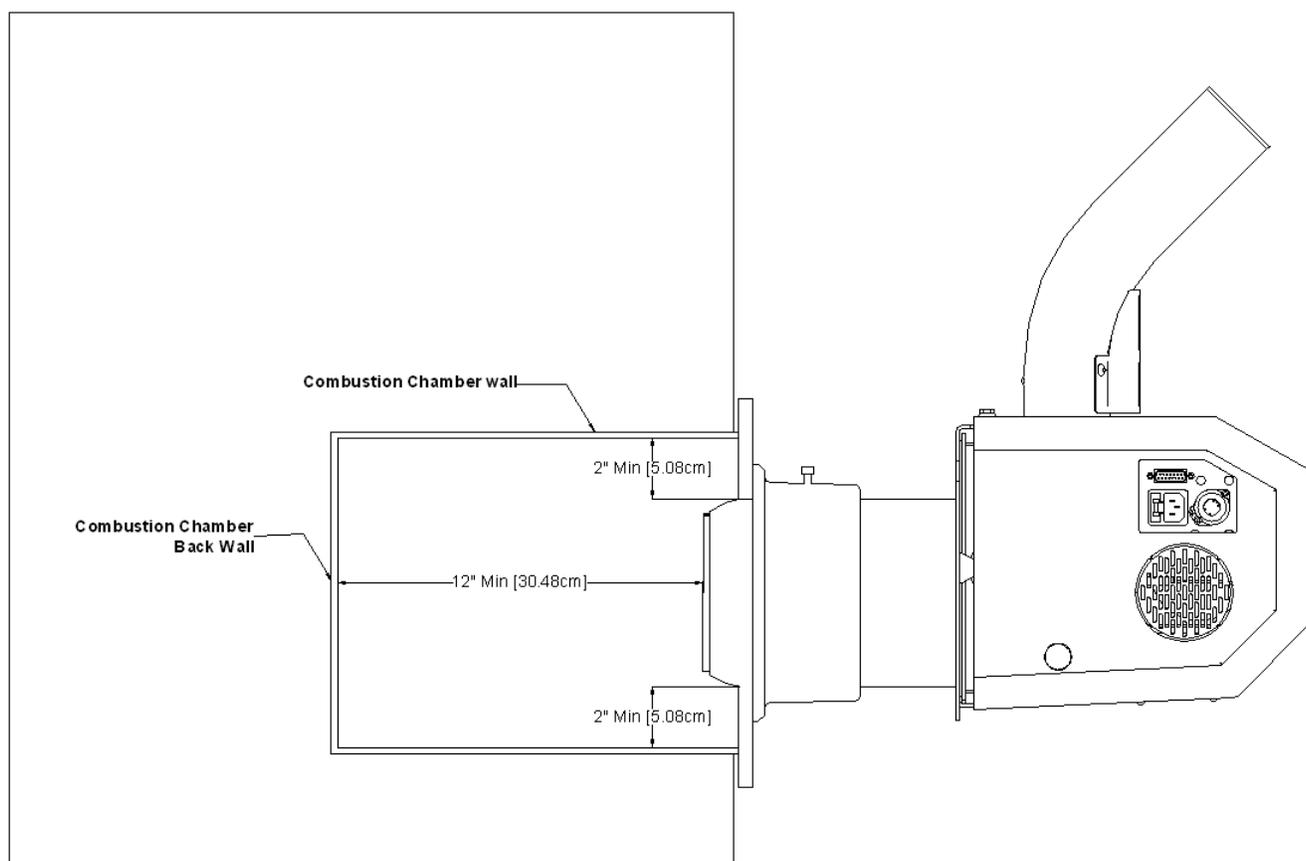
Combustion Chamber Tube in the Boiler:

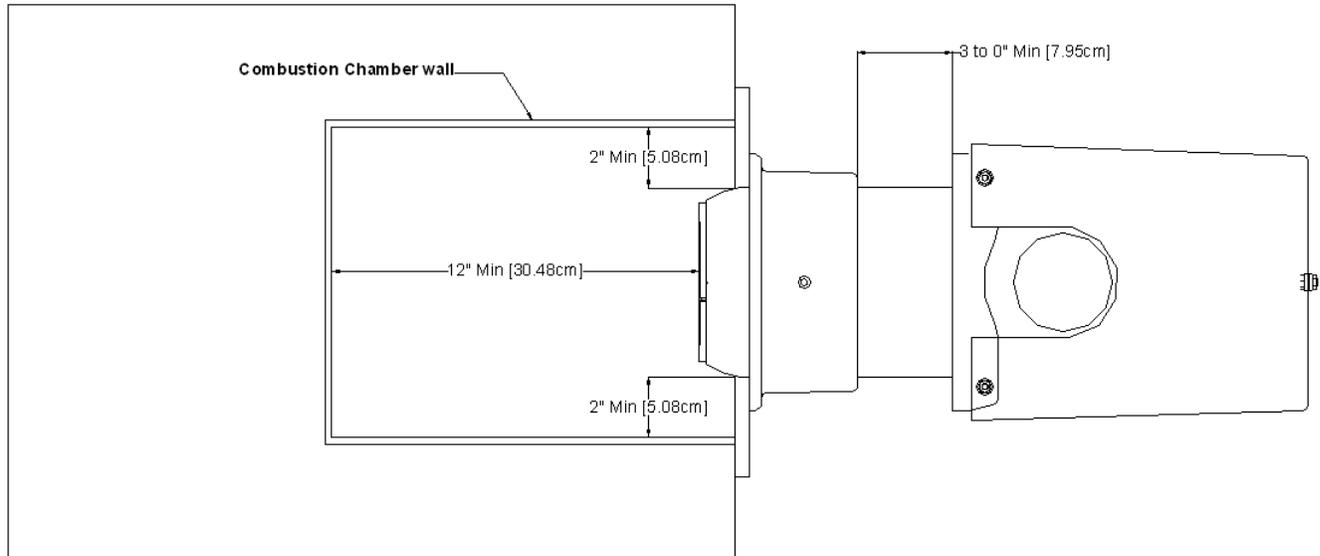
Length: 4 - 1/2" / 11.51 cm
 Diameter: 6 - 1/8" / 15.49 cm

Combustion Chamber (recommended dimensions)

Depth: 13 - 5/8" / 34.49 cm
 Width: 10" / 25.50 cm
 Height: 10" / 25.50 cm

For to ease maintenance and service we recommend a free space of approximately 12" / 30.48 cm of depth and 2" / 5.08 cm from the outside of the combustion chamber tube as shown in the drawings that follow.





1.9 Principal Function

The Pellix burner is meant to be installed in a boiler and fuelled with wood pellets. The supplied auger transports the fuel from a pellet hopper to the burner. The control box contains a microprocessor system that monitors and regulates the combustion. The supplied temperature sensor starts and stops the burner, automatically referencing the boiler temperature. A warm air element ignites the fuel. The start procedure is designed to create a quick and almost smoke free ignition.

The burner starts automatically when the boiler temperature cools down to the set start temperature. It runs until the preset maximum boiler temperature (switch-off temperature) has been reached, e.g. 176 - 185° F / 80 - 85° C. When the boiler stops automatically, a short cooling-down and self cleaning period is initiated. The burner can be set for operation with four different start-stop differences, 50, 60, 70, or 80° F / 10, 15, 20, or 25° C.

Power interruptions and disturbances are taken care of by the control system. After a power interruption, the present conditions are checked against the previous settings after which the burner restarts. When a disturbance occurs, the burner can be operated in an "Extra Safe Mode" (See section 1.5 Safety Systems) or if there is a safety risk, the burner switches off.

As an additional option, the control box may be configured to work as an accumulator regulator. This feature allows for longer run times. This feature is enabled when an optional second temperature sensor (not included) is installed in the accumulator to shut off when the accumulator preset temperature has been reached or when the boiler has reached 194° F / 90° C, whichever occurs first.

1.10 Pellet Quality

Not all wood pellets make good fuel. It is always a good idea to review the pellet's analysis and try some before committing to several tons. Higher pellet quality allows for more efficient operation. Many variables contribute to the quality of a wood pellet. Many of these have been identified and are regularly tested for by most pellet manufactures and distributors. The Pellet Fuel Institute (PFI) has a non mandatory pellet grading system that is as close to an accepted national standard as exists. PFI classifies wood pellets into four grades, Super Premium, Premium, Standard and Utility based on a series of these predictive tests. While the PellX burner works best on the Super Premium grade pellets, it is capable of running on Premium and even Standard grade when adjusted to do so. Better pellets will provide you with more efficient combustion, less maintenance, and more heat. If a pellet manufacturer chooses not to use the PFI certification program, it doesn't necessarily mean they make a poor pellet. All quality pellet manufacturer's regularly test their product and have those results available. Below are some definitions with parameters to help in determining pellet quality.

Pellet Material: Pellets should be made of softwood or hardwood or some combination of the two. Pellets should smell like wood. If not, then other materials may have been used in their manufacturing process. Examples are cardboard and paper that produce excessive ash and require chemical binders to hold the pellets together. All wood pellets (100% wood) don't require binders and rely on the lignin in the wood to hold the pellets together. A few all wood pellets dropped in a glass of water should swell up quickly. If they don't swell up, this may be an indication that the pellets are not entirely made of wood. Softwood typically produces less and lighter ash and has a higher BTU pound for pound than Hardwood. Bark and stump material should also be avoided because of the concentration of impurities that can cause clinkers or sinter at high and prolonged combustion temperatures. Bark is darker and is characterised by little dark fragments that can be seen in the pellet center after breaking open the pellet or on the pellet surface.

Pellet Size: A pellet diameter of 1/4" to 5/16" / 0.64 cm to 0.79 cm must be used with a maximum length of less than 1-1/2" / 3.81 cm. You should look for consistency in size.



WARNING

Only wood pellets are to be used with this burner. No other fuel is to be used in the burner.

NEVER BURN ANY TYPE OF CORN, CHERRY PITS, STICKS OR OTHER TYPES OF FUEL IN THE BURNER.

Burning wood pellets according to recommendations and the specifications set forth will assure longer burner life and lessen potential maintenance issues.

Pellet Bulk Density: A bulk density of 40 to 46 lbs per cubic foot / 604.6 to 695.3 kg per cubic meter is the recommendation for Super Premium and Premium graded pellets.

Pellet Moisture Content: The humidity of wood pellets needs to be 10% or less. Care needs to be taken that the pellets are stored in as dry a location as possible.

Pellet Energy Content / BTU Value: An energy content of 7,300 to 8,500 BTU of energy per pound of pellets is a typical measure. BTU content is not a requirement for grading but is a useful test for fuel comparisons and output calculations.

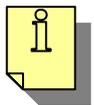
Pellet Ash Content: Ash content is the amount of material left after combustion, measured as a percentage. 1% or less is recommended. Less ash means less maintenance.

Pellet Ash Fusion: Ash fusion is the temperature at which the ash gets sticky. 2,300° F / 1,260° C or higher is best. Sticky ash will cool and fuse into a hard “coal like” material often called “clinkers” or “sinter”. These clinkers will obstruct air flow leading to inefficient burning. Clinkers can cause the burner to overheat and shut down. Bark and root material are often associated with low (poor) ash fusion temperatures. This test is not yet a requirement for PFI grade determination in this country.

Pellet Fines: Fines is the percent of material that passes thru a 1/8” / 0.32 cm screen. 0.5% or less is the accepted standard for Premium and Super Premium graded pellets.

Pellet Durability Index (PDI): The PDI measures the ability of a pellet to hold together while being moved around. It is expressed in a percentage of pellets that don’t turn into fines (less than 1/8”) after a specific tumble test. 97.5% is the proposed requirement for premium and super premium graded pellets. Look for size consistency in the pellets. A large size variation is a good indication that the pellets are not very durable.

Pellet Chloride Content: The chloride content is the amount of chloride and other salts in the pellets, expressed in parts per million, PPM. Excessive salt content can cause corrosion and other unwanted effects. This component is not part of the PFI standard yet but is commonly tested for. A chloride concentration less than 300 PPM is the recommendation.

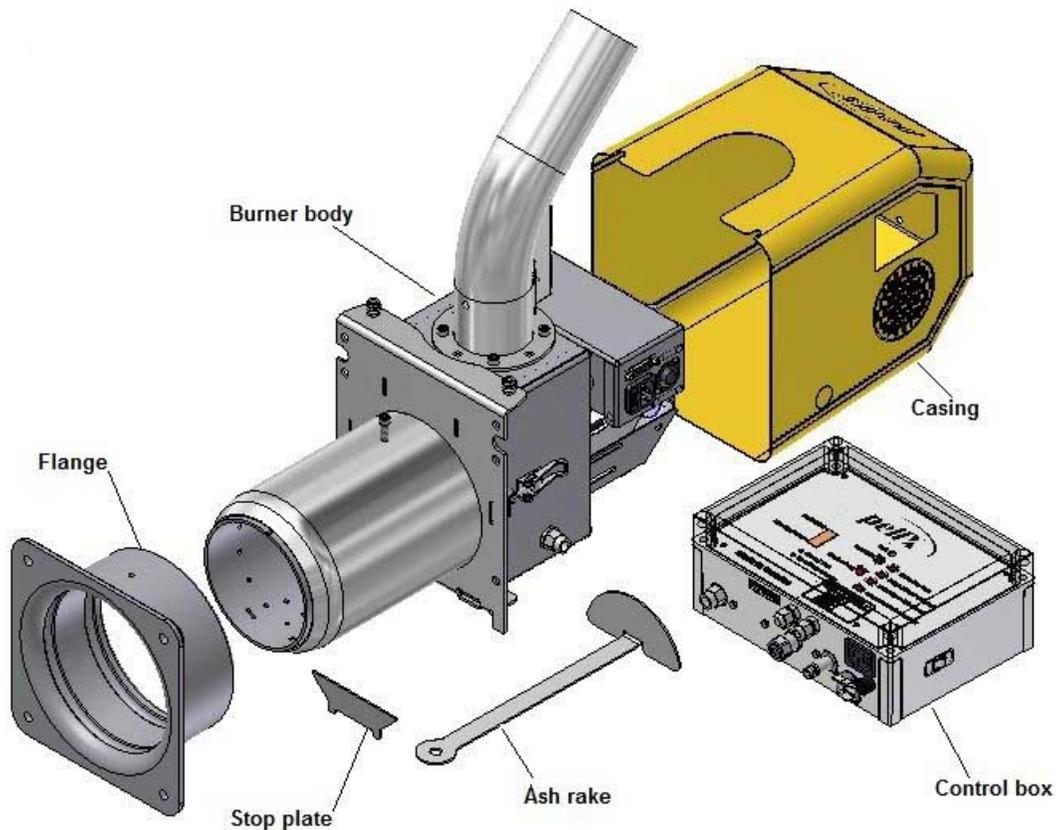

NOTE

Proper fuel and air ratios are set during the burner’s setup using a particular type of pellet. If you switch pellet suppliers and the pellets vary significantly it will be necessary to readjust the burner’s fuel air ratios to obtain optimum performance.

The following table represents the pellet properties that are recommended by PellIX.

Pellet Properties	PellIX recommendations
Material	Wood
Size	Dia ¼” to 5/16” / .64cm to .81cm Max length 1-½” / 3.8cm
Ash Content	≤ 1 %
Fines	≤ 0.5%
Moisture content	≤ 10%
Ash Melt	≥ 2,370° F / ≥ 1,300° C
Density	39 – 40 lb/ft³ / 630 - 650 Kg/m³
Energy Density	≥ 7,300 per lb / ≥ 4.3 kWh/Kg / 7,300 - 8,500 BTU / lb

1.11 Delivery Check List

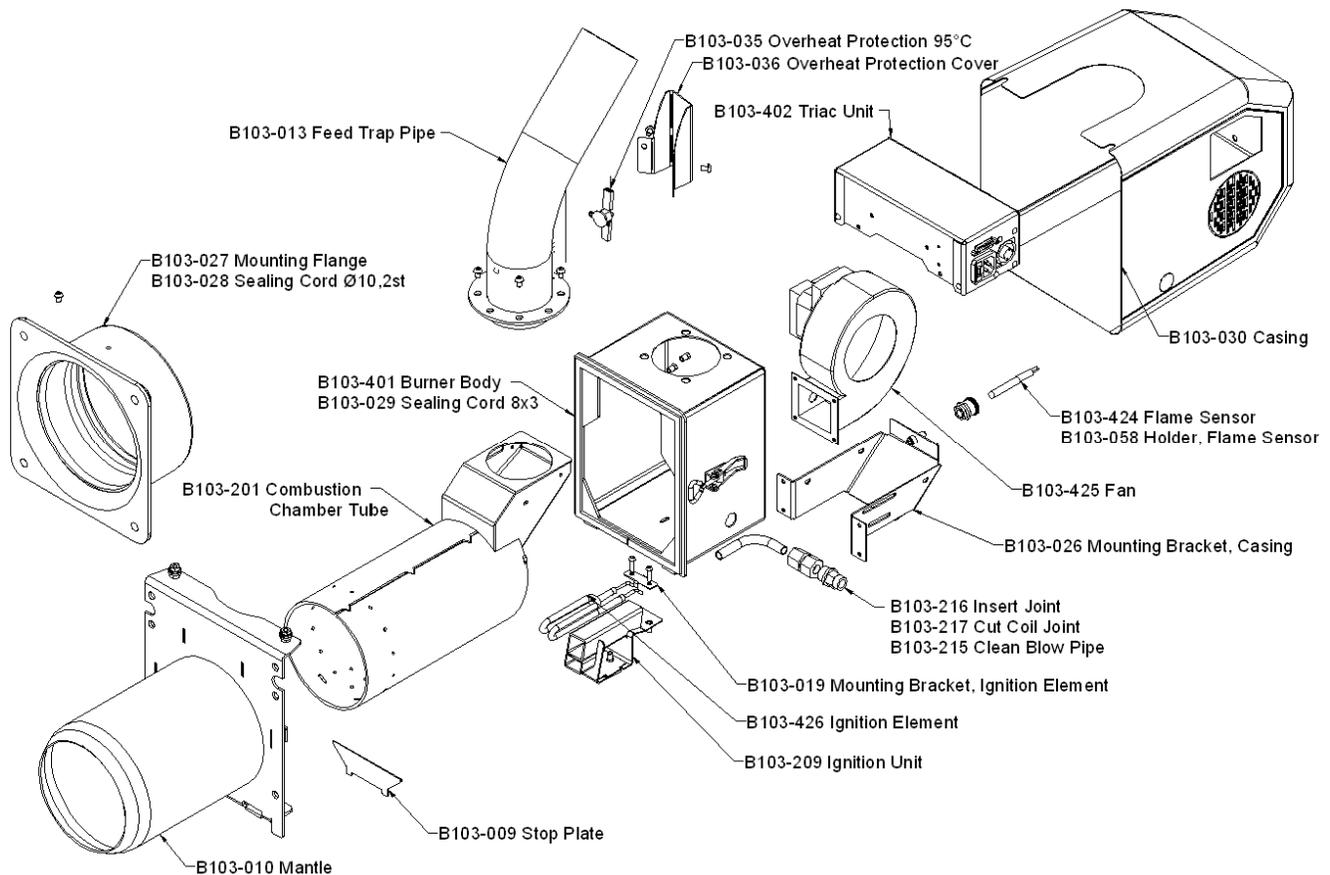


The standard delivery includes the above shown equipment. The pellet burner parts list is shown on the next page. The sealing cords, 2 pieces, and the stop screw, 1 piece, belong to the mounting flange.

The following items are also included in the box:

- Instruction Manual
- Short Maintenance Instruction (A4 Poster)
- Plastic Tubing (Grey Pellets Tubing)
- Hose Adapter Between the Plastic Tubing and the Flame Trap Pipe
- Hose Clamps, Two (2) Pieces (For the Plastic Tubing)
- Suspender (Straps for the Feed Screw)
- Signal Cable, 118" / 299.7 cm (15-Poles D-Sub Cable)
- Main Power Cable, 78.74" / 199.9 cm (For the Main Power Supply to the Burner)
- Temperature Sensor Cable, 157.4" / 392.9 cm, Temperature Sensor Start / Stop, For Connection to the Control Box. (393.70" / 999.9 cm Length As Option)
- 118" / 299.7 cm Device Cable Control Box – Burner
- 59" / 149.8 cm Compressed Air Hose Control Box – Burner

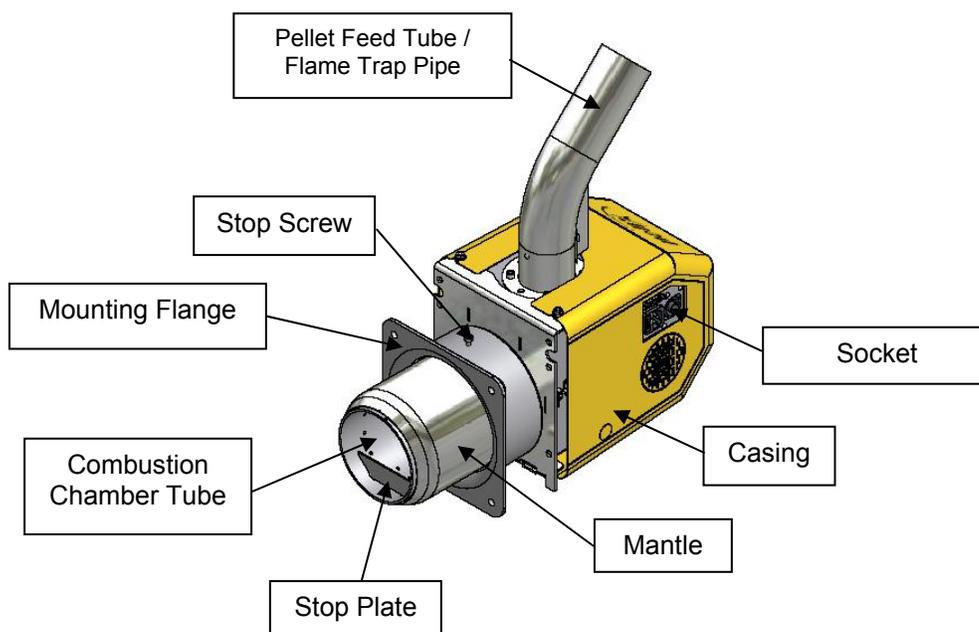
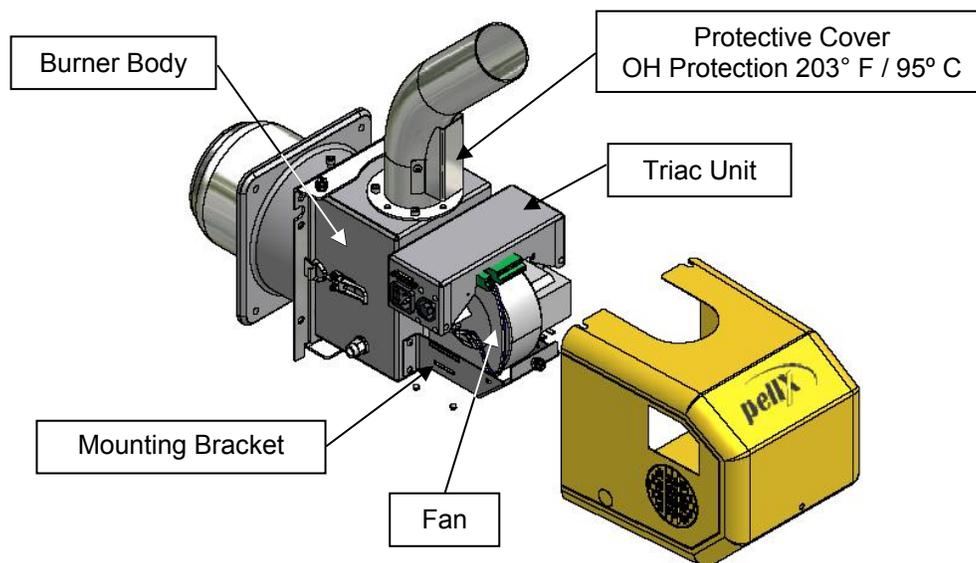
1.12 Burner Parts List

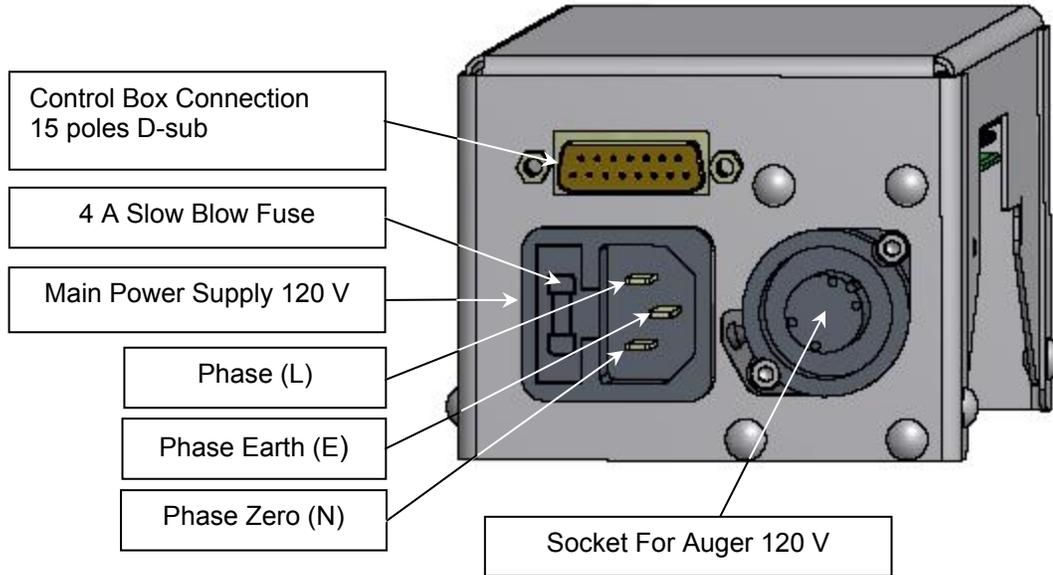


B103-009	Stop Plate
B103-010	Mantle
B103-013	Feed Trap Pipe / Flame Trap Pipe
B103-019	Mounting Bracket, Ignition Element
B103-026	Mounting Bracket, Casing
B103-027	Mounting Flange
B103-028	Sealing Cord Ø10,2st
B103-029	Sealing Cord 8x3
B103-030	Casing
B103-035	Overheat Protection 95°C
B103-036	Overheat Protection Cover
B103-058	Holder, Flame Sensor
B103-201	Combustion Chamber Tube
B103-209	Mounting Bracket, Ignition Unit
B103-215	Clean Blow Pipe
B103-216	Insert Joint
B103-217	Cut Coil Joint
B103-401	Burner Body
B103-402	Triac Unit
B103-424	Flame Sensor
B103-425	Fan
B103-426	Ignition Element

2. Operation and Maintenance

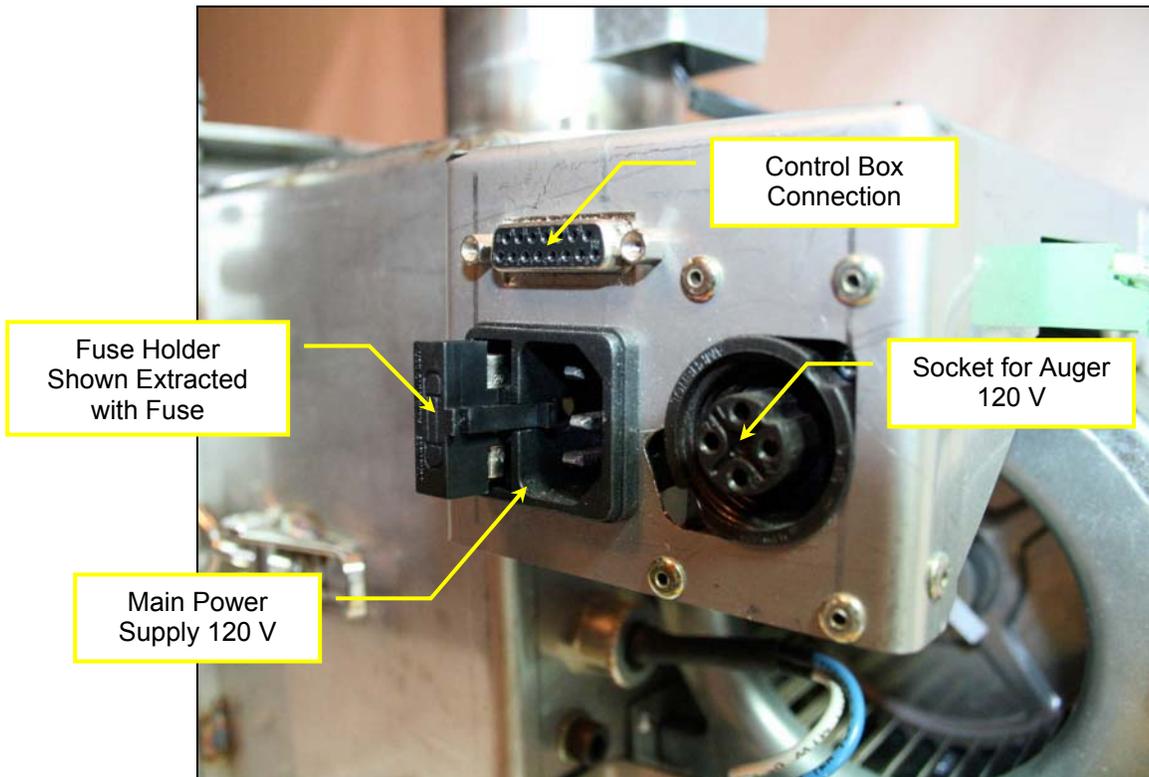
2.1 Burner





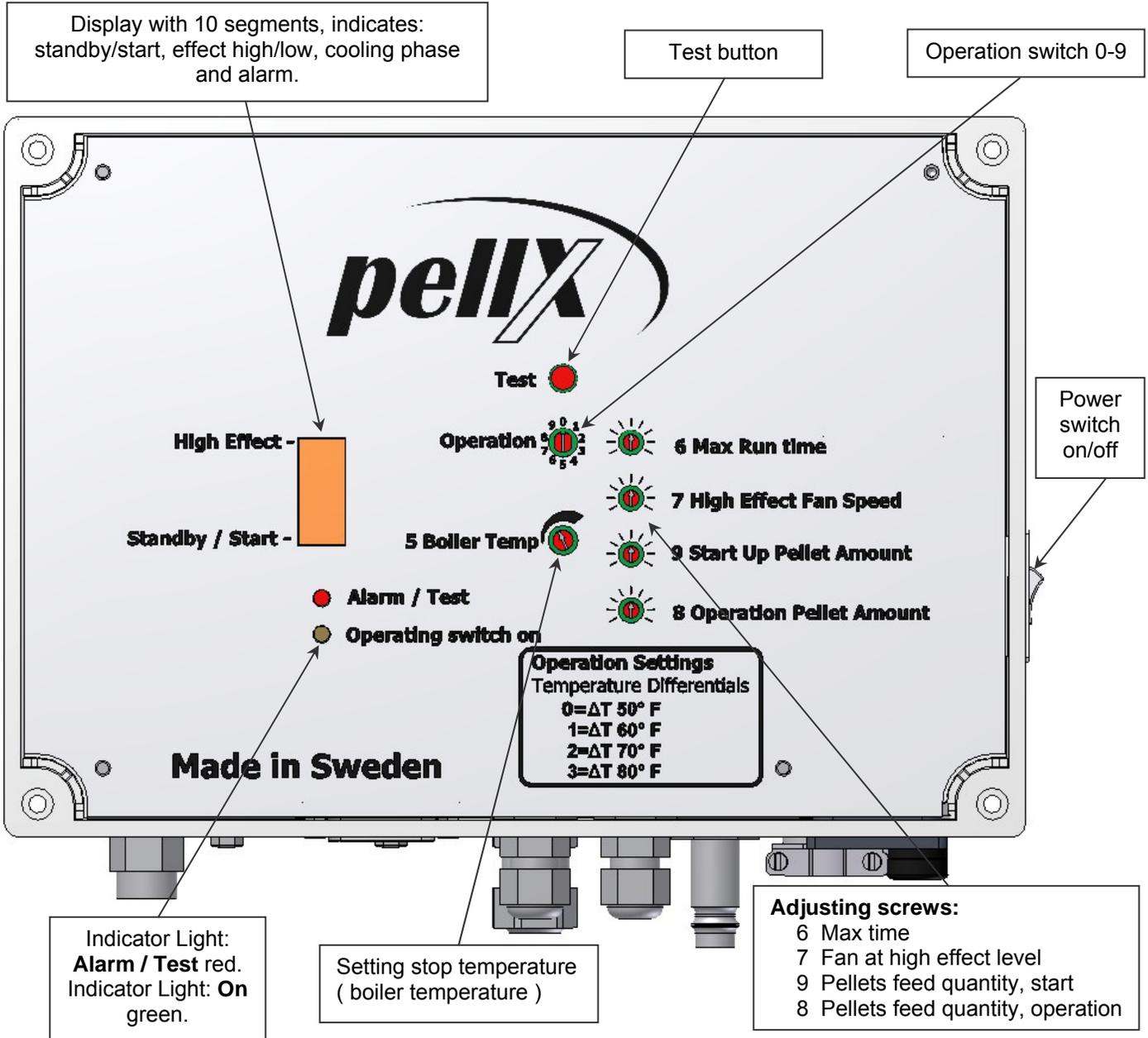
WARNING

DO NOT connect the burner main power supply directly to a wall socket as there will be no protection against overheating of the boiler. Any damaged 120V cable must be replaced with a new cable of the same type from PelIX. Use of a non-PelIX cable will void the warranty.



2.2 Control Box – Settings and Functions

The separate control box shall be mounted onto a wall or a cool part of the boiler. Remove the transparent cover for access to the setting screws. Remove the front panel for access to the process card, and the terminals. The control box is connected to the burner with the signal cable and to the boiler with the temperature sensor, compressed air hose, and power cable.



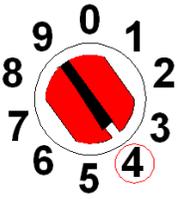
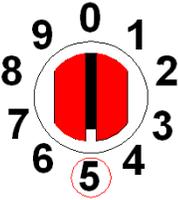
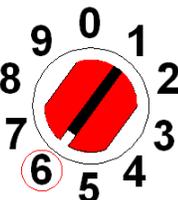
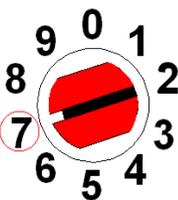
Operation Switch Levels 0 - 9:

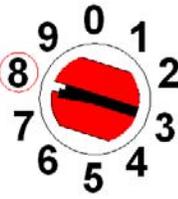
(dT is the temperature difference between start and stop of the burner.
Set switch-off temperature (boiler temp.) – dT = burner start temperature)

Test Function, Burner Standby				Test Function, Burner In Operation			
0	Operation dT 50° F / 10° C	5	Boiler stop temperature and current temperature settings	0	Operation dT 50° F / 10° C	5	Shows actual boiler temp - temp sensor 1
1	Operation dT 60° F / 15° C	6	Max run time setting	1	Operation dT 60° F / 15° C	6	Shows max run time setting
2	Operation dT 70° F / 20° C	7	High effect fan speed setting	2	Operation dT 70° F / 20° C	7	Shows high effect fan speed setting
3	Operation dT 80° F / 25° C	8	Operation pellet amount setting	3	Operation dT 80° F / 25° C	8	Shows operation pellet amount setting
4	Self Cleaning Test and Function Test	9	Start up pellet amount setting and 15 minute auger fill mode	4	None	9	Shows start up pellet amount setting

	<p><u>Run Operation Setting # 0:</u> Start up temperature 50° F (10° C) below maximum boiler setting.</p>
	<p><u>Run Operation Setting # 1:</u> Start up temperature 60° F (15° C) below maximum boiler setting. *</p>
	<p><u>Run Operation Setting # 2:</u> Start up temperature 70° F (20° C) below maximum boiler setting.</p>
	<p><u>Run Operation Setting # 3:</u> Start up temperature 80° F (25° C) below maximum boiler setting.</p>

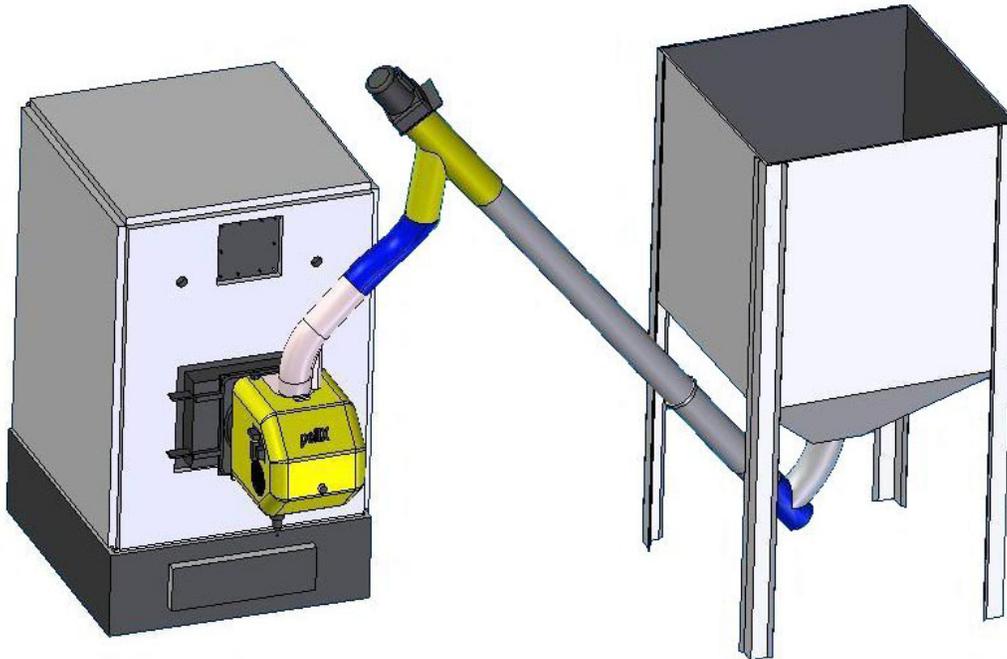
* Example: If the maximum temperature of the boiler is set at 194°F (90° C), then in run operation setting # 1, the burner will turn off at 194° F (90° C) and will turn back on at 140° F (75°C).

	<p><u>Test Function # 4: Function Test:</u> (Ignition element and fan run for 5 minutes. The flame sensor measures light intensity. (0 - 10 segments)) Turn the power switch to the off position. Turn the operation switch to # 4. Turn the power switch to the on position. The Test LED is off and the Operating LED flashes green. Push the test button once. The Test LED is on as solid red and the Operating LED flashes green. The heating element and fan run for 5 minutes. The flame sensor measures the light and displays the value on the LED bar.</p>
	<p><u>Test Function # 4: Self Cleaning Valve Test:</u> (Cycles the self cleaning valves twice.) Turn the power switch to the off position. Turn the operation switch to # 4. Turn the power switch to the on position. The Test LED is off and the Operating LED flashes green. Push the test button once. The Test LED is on as solid red and the Operating LED flashes green. Wait 5 seconds or more. Push the test button twice. The Test LED is off and the Operating LED flashes green. Both self cleaning valves will open and close twice. Turn the burner off after the cycling of the valves.</p>
	<p><u>Test Function # 5: Displays the boiler's turn off temperature and current temperature.</u> Turn the power switch to the off position. Turn the operation switch to # 5. Turn the power switch to the on position. The Test LED is off and the Operating LED flashes green. Push the test button once. The Test LED is on as solid red and the Operating LED flashes green. The boiler's stop temperature (maximum temperature) is displayed by the number of green LED (2 - 10) bars. The stop temperature (maximum temperature) can be adjusted using the # 5 Boiler Temp potentiometer. Push the test button once. The boiler's current temperature is displayed by the number of green LED (2 - 10) bars. Push the test button once. The second temperature sensor (if installed) displays the current boiler temperature by the number of green LED (2 - 10) bars. Push the test button once. This cancels the test.</p>
	<p><u>Test Function # 6: Maximum Run Time Adjustment.</u> Turn the power switch to the off position. Turn the operation switch to # 6. Turn the power switch to the on position. The Test LED is off and the Operating LED flashes green. Push the test button once. The Test LED is on as solid red and the Operating LED flashes green. Push the test button once. The LED bars display the maximum run time with each LED bar equal to 30 minutes. The maximum run time can be adjusted using the # 6 Max Run Time potentiometer. If you have poor quality pellets and long run times, clinkers or sinter can form. Reducing the run time forces the burner to shut down and go through a cleaning cycle. The burner will re-ignite and continue operation. Note that the maximum run time can be adjusted while the burner is in full operation mode without having to change the operation switch.</p>
	<p><u>Test Function # 7: High Effect Fan Speed.</u> Turn the power switch to the off position. Turn the operation switch to # 7. Turn the power switch to the on position. The Test LED is off and the Operating LED flashes green. Push the test button once. The Test LED is on as solid red and the Operating LED flashes green. The LED bar displays the maximum fan speed for high effect. The high effect fan speed can be adjusted using the # 7 High Effect Fan Speed potentiometer. When you adjust the #7 High Fan Speed potentiometer, wait a couple of minutes and then recheck the flame quality and combustion gasses. Note that the high effect fan speed can be adjusted while the burner is in full operation mode without having to change the operation switch.</p>

	<p>Test Function # 8: Test and Adjust Pellet Feed Rate. Turn the power switch to the off position. Turn the operation switch to # 8. Turn the power switch to the on position. The Test LED is off and the Operating LED flashes green. Push the test button once. (Note: When the test button is pressed once, the auger runs with 20 second pauses for 18 cycles. If the test button is pushed twice instead of once, the auger runs with only 2 second pauses for 18 cycles, reducing the total time of the test.) The Test LED is on as solid red and the Operating LED flashes green. The LED bar displays the feed rate and feeds pellets for 6 minutes. When you adjust the #8 Operation Pellet Amount potentiometer, wait a couple of minutes and then recheck the flame quality and combustion gasses. In #8 Test mode, collect the pellets during the 6 minute test, weigh them, and check the “supplied effect” graph in the installation manual (See section 5.1.3) to determine the BTU output. Note that the pellet feed rate “operation” can be adjusted while the burner is in full operation mode without having to change the operation switch.</p>
	<p>Test Function # 9: Start Up Pellet Amount. Turn the power switch to the off position. Turn the operation switch to # 9. Turn the power switch to the on position. The Test LED is off and the Operating LED flashes green. Push the test button twice. The Test LED is on as solid red and the Operating LED flashes green. The LED bar displays the start up pellet amount. The start up pellet amount can be adjusted when you adjust the #9 Start Up Pellet Amount potentiometer. The start up amount of pellets should be around 1 cup / 200 - 250 grams / 7 - 8 oz. If the start amount is too low, the burner won't start. If the start amount is too high, the burner will “pop”. Note that the start up amount of pellets can be adjusted while the burner is in full operation mode without having to change the operation switch.</p>
	<p>Test Function # 9: To Load Pellet Auger: (Runs auger for 15 minutes.) Turn the power switch to the off position. Turn the operation switch to # 9. Turn the power switch to the on position. The Test LED is off and the Operating LED flashes green. Push the test button once and wait 5 seconds. The Test LED is on as solid red and the Operating LED flashes green. Wait 5 seconds. Push the test button twice. The Test LED flashes red and the Operating LED flashes green. The pellet auger runs for 15 minutes. The Test LED is off and the Operating LED flashes green.</p>

A separate large print [Control Panel Adjustments Instruction Sheet](#) of the above functions in graphical display is included with the manuals.

2.2.1 Pellet Auger



The pellet auger consists of a spiral that rotates in a pipe. The auger motor is operated by the burner's control box and is connected to the burner socket.

When mounted in an open hopper, the intake of the auger must have a distance to the nearest wall of at least 5.08 cm / 2" **when no special outlet is used**. The PellX auger must be fastened against the hopper; otherwise it will work itself into the hopper.



WARNING

Operation with maximal auger can reach very hot temperatures up to 122° F / 50° C. This is perfectly normal but the auger must never be covered with any combustible material. A built-in heat protection stops the motor if it gets hotter. Notice the danger of burn injuries.



WARNING

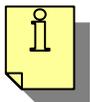
The rotating auger spiral may cause serious injuries. The auger must always be protected so that no movable parts are within reach during operation. Depending on the design of each and every installation, there can be a demand for safety switches and / or an emergency stop device along with protective bars. It is not allowed to disable any installed protective devices or safety precautions during operation.

2.3 Start-Up / Operation, Shut-Down, and Faults

WARNING

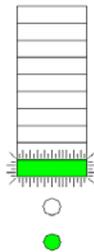
Never remove the pellet hose or open the fireplace door during the start up phase. The resulting influx of air can create a “boiler pop” which can cause burn injuries.

2.3.1 Start-Up / Operation of the Burner



NOTE

The lowest indicator light when displayed, as shown to the right, indicates that this is a flashing light.

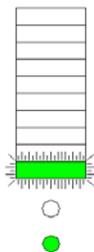


KEY

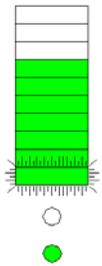
	Flashing Light
	Solid Light
	No Light

Start Modes:

Turn the control box power switch to the on position, the **Operating switch on** indicator light will be illuminated. If the boiler temperature is below the preset start temperature, the burner will start. When the **Start Sequence** begins, the light **Standby / Start** on the display starts flashing and the burner ignition element is heated up. After just over a minute a start portion of pellets is fed. There is intermittent fan operation for about 5 minutes until the flame is detected. When the start portion is done, the fan starts to blow for ignition of the fuel.

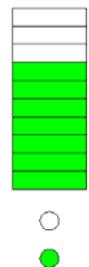


When the pellets are ignited and burn with a flame big enough to be seen by the flame sensor, the burner goes into the **Start Phase** and the ignition element is turned off. This is showed by 7 segments in the display with the lowest one still flashing. The purpose of the start phase is to get the whole start portion to catch fire as fast as possible and make a stable glow bed before the burner goes to **Pre Operation Mode**. The fan speeds up and the flame sensor monitors the flame.



Operation Modes:

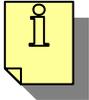
When the flame is established, the burner goes to **Pre Operation Mode**. The light **Standby / Start** on the display stops flashing and 7 segments are illuminated. The burner runs with the fan and feeder in pre operation mode for approximately two minutes to stabilize the combustion. The flame sensor monitors the flame before it is allowed to go into **Operation Mode**.



In case of ignition failure, the burner will make a new ignition attempt. After three failed start attempts, or if the flame goes out before the burner has reached **Operation Mode**, the burner is shut down, which is indicated by the **Alarm / Test** light on the control box. (See *Chapter 3 Trouble Shooting.*)

WARNING

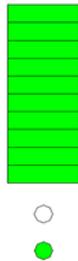
At failure of ignition, do not open the door to the fireplace until the combustion chamber is completely ventilated! Wait for at least 10 minutes after the third start attempt. Wear protective clothing and eye protection as the door may be hot. Open the door slowly to prevent hot pellets or particles from flying out the door.



NOTE

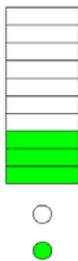
You can see the signal from the flame sensor during start and operation by pushing the test button. The normal value is 3 - 9 illuminated segments.

After **Pre Operation Mode**, the burner goes into **Operation Mode** and all the 10 segments on the display are illuminated. The fan runs with the speed that is set for full operation. (The fan speed and pellet feed rate are adjustable.) An operational portion of pellets is fed into the burner with a regular interval set for full operation. The burner now runs on full effect.



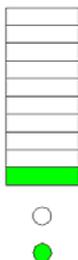
Extra Safe Mode:

The burner runs with full effect until the boiler temperature has reached approximately 41° F / 5° C below the set stopping temperature (switch-off temperature). In **Extra Safe Mode**, the burner runs with 65% effect until the switch-off temperature is reached. The burner can also stop if the maximum time set in Function # 6 is exceeded.



Phase Out Mode:

When the boiler has reached the set temperature (or if the power switch on the control box is turned off) the fuel feed stops and the fan continues to run as the fire starts to **Phase Out**. The light **Standby / Start** on the display shows a fixed light. When the flame sensor does not recognize any flame, the fan runs for 4 minutes then shuts off. (A burner equipped with self cleaning goes through the cleaning process prior to the fan shut off as described in Section 2.3.3 Self Cleaning Cycle.) The burner then goes into the **Standby** mode. **Standby / Start** on the display shows a fixed light. The burner starts again when the boiler temperature has gone down to the set start temperature.



WARNING

Be careful when opening the flame inspection port during operation as hot pellet parts may come out of the inspection port. Wear protective clothing and eye protection. Keep your distance and be prepared to close the inspection port.



WARNING

The boiler door, burner mounting flange, and mantle will be very hot during operation. Contact with non- or insufficiently insulated surfaces can lead to burn injuries.

2.3.2 Shut-Down of the Burner for Cleaning

Always turn off the power switch on the control box so the main supply of power is disconnected. If not, the burner will recognize a failure in the power supply and will run a few minutes in cooling phase when connected to the main power supply again.

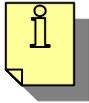


When the burner is in standby mode, the **Operating switch on** and **Standby / Start** light goes out immediately after the power switch has been turned off.

If the burner is in operation when turned off, the burner goes into the phasing-out mode. The fuel feed stops. **Standby / Start** on the display shows a fixed light while the fan is running. When the flame sensor doesn't recognize any flame (i.e. the pellets in the combustion chamber tube are burnt) the fan will run for a few minutes and the self cleaning sequence stops for burners with



self cleaning. The burner operation is stopped until the power switch is turned on again.



NOTE

Disconnect the main power supply by removing the main power cable from the burner.



WARNING

Let the burner cool down before touching it – there is a risk of burn injuries, even with the use of gloves! The combustion chamber tube, mantle, mounting flange, and burner body will reach very high temperatures during operation.

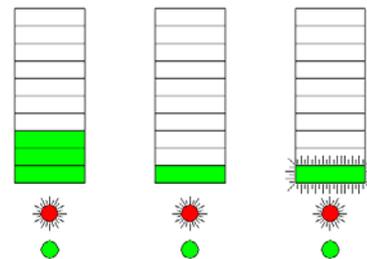
2.3.3 Self Cleaning Cycle

For self cleaning, the burner goes into the shut down mode and waits for the flame sensor to stop seeing light. This can take a few minutes. Once the flame sensor no longer sees light, the fan runs on adjusted high speed for four minutes. After that, the fan runs on maximum speed for two minutes. The self cleaning starts by opening solenoid valve #1 for two seconds. After a ten second pause, solenoid valve #2 opens for two seconds. This action represents a full cleaning cycle. This cycle repeats two more times. After the completion of three cycles, the fan is on maximum speed for about one minute, and then performs a controlled shut down at lower and lower speeds until the fan is off.

2.3.4 Fault / Power Interruption

The **Alarm / Test** light is illuminated with a red light when a fault occurs and the display shows the operational mode of the burner at the fault moment. In the event of a power outage or if the power is disconnected, the red light and segment indicators will not be displayed.

If the burner runs in the **Extra Safe Mode**, the **Alarm / Test** light will show a red flashing light and the display shows: 3 segments if in operation, 1 segment if in phasing out or standby and 1 segment flashing if in start phase.



After a power interruption the burner will restart automatically (once the phasing-out period with the fan is completed) provided that the boiler temperature is below the set start temperature. If the boiler temperature is above the start temperature, the burner will run the phasing-out sequence and then go into standby mode until the boiler has cooled down.



CAUTION

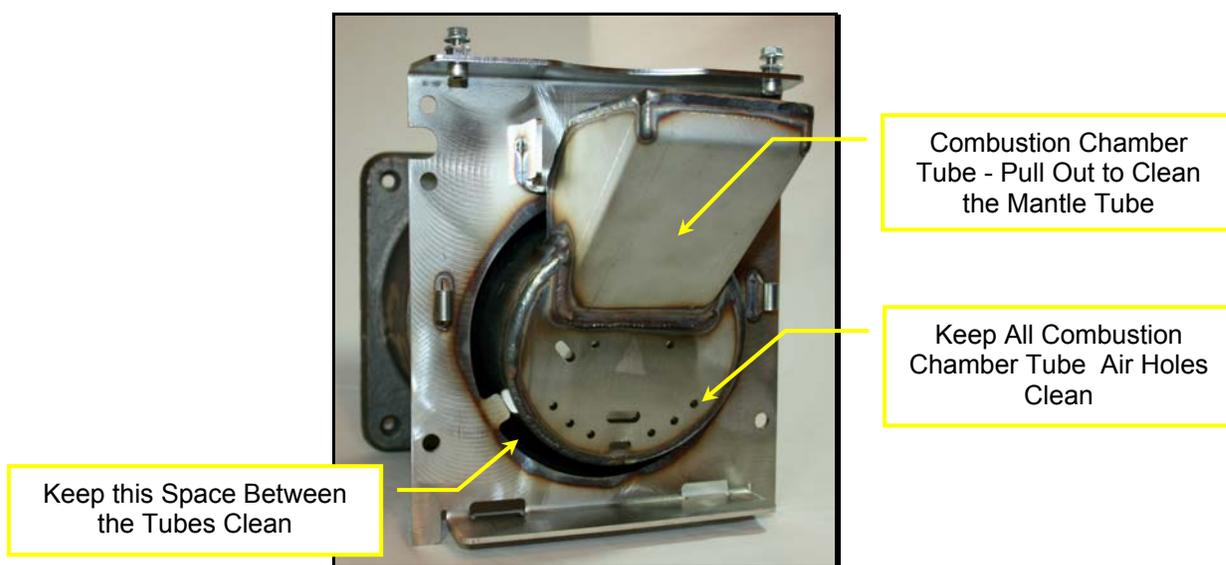
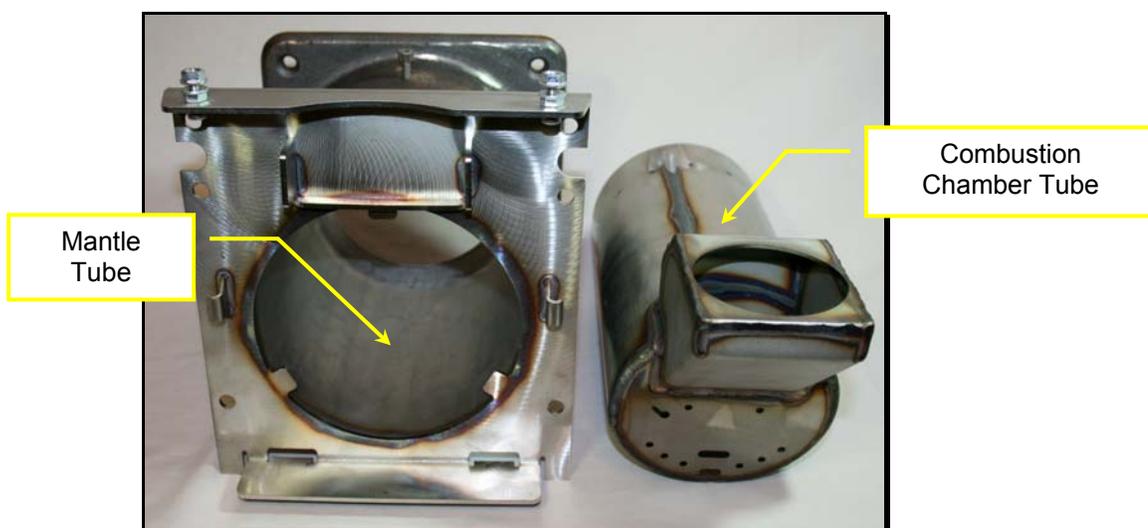
If the Alarm / Test light shows a solid or flashing red light, immediately find out the reason and fix the problem. (See Chapter 3 *Trouble Shooting*.) If you can't solve the problem, contact your PellX dealer or authorized representative.

2.4 Maintenance

All firing of solid fuel requires a regular cleaning of the burner and boiler. The ash must be removed from the combustion chamber tube and the fireplace bottom at least once a week during the heating season.

A layer of ash and soot that covers heat-transferring surfaces in the boiler means that less heat is transferred to the boiler water. The warmer the flue gas, the more heat will disappear through the chimney. If you install a flue gas thermometer on the boiler exhaust pipe, it is easy to check when the temperature goes up and it is time to clean.

The space between the mantle tube and the combustion chamber tube must be free from ash and slag. The ash should be removed at least four (4) times a year. Check at the same time that the air holes in the combustion chamber tube are open.



The amount of shavings and other wood residuals in the fuel hopper should be checked a couple of times a year. The hopper is cleaned as needed.

Change of fuel quality may require adjustment of fuel feed and air flow to the burner. Contact an authorized PellX installation contractor.

**CAUTION**

If the boiler has been previously fuelled with wood, there is a risk of soot-flakes or creosote fragments loosening from the chimney and blocking the flue gas pipe and the opening of the exhaust valve. Clean and check the condition of the chimney when removing the ash during the first two months after a new installation.

**WARNING**

There is risk of fire or explosion.

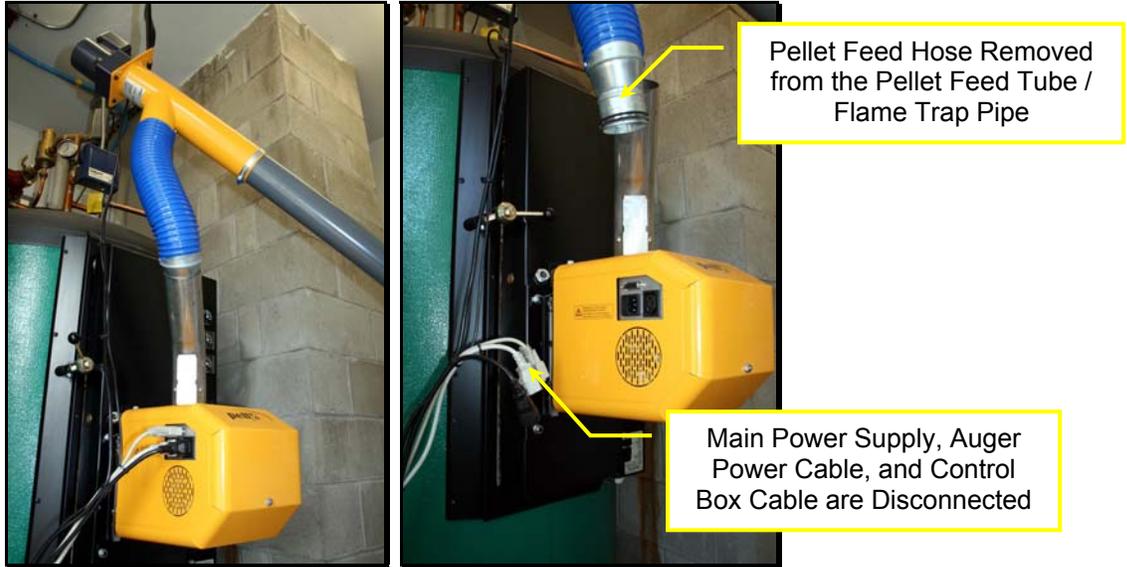
Remember there is a risk of dust explosion when cleaning the fuel hopper. Use enclosed lighting and make sure that no sparking occurs. Always use breathing protection against the dust when handling the pellets. Also use gloves and protective goggles when cleaning the burner.



2.4.1 Cleaning the Combustion Chamber Tube and Mantle Tube

Removing Ash from the Combustion Chamber Tube

Turn off the power switch. Let the burner stop and cool down for a minimum of 15 minutes. Disconnect the connection cable to the burner's main power supply. The power cable to the auger feed screw and the control box cable must also be disconnected. Remove the pellet feed hose from the pellet feed tube / flame trap pipe.



Open the door of the boiler on which the burner is mounted. It might be necessary to draw the burner out a bit from the mounting flange after loosening the stop screw. Mark the position of the burner prior to drawing it out so that it can be remounted in the same position.

If the burner is not mounted in a door, remove it from the mounting flange and place it on a steady and heat resistant base. Another way is to open the burner as described in **Cleaning the Space between the Mantle and the Combustion Chamber Tube** that follows these instructions.



Remove the stop plate from the combustion chamber tube and scrape off ash and slag with the supplied ash rake. Check that the air holes in the combustion chamber tube are free from residuals.



Remount all components in reverse order. Remember to replace the stop plate. Connect the control box cable before connecting the main power supply and auger power cable. Reconnect the pellet feed hose from the pellet feed tube / flame trap pipe.



WARNING

Ash must be kept in a fireproof, covered vessel until it is cooled down and you are sure that there is no glow left. NEVER use a household or shop vacuum cleaner to remove ash as the vacuum may catch fire due to hot ash. Specialized ash vacuums and ash attachments are available. Please contact your authorized Pellix dealer.

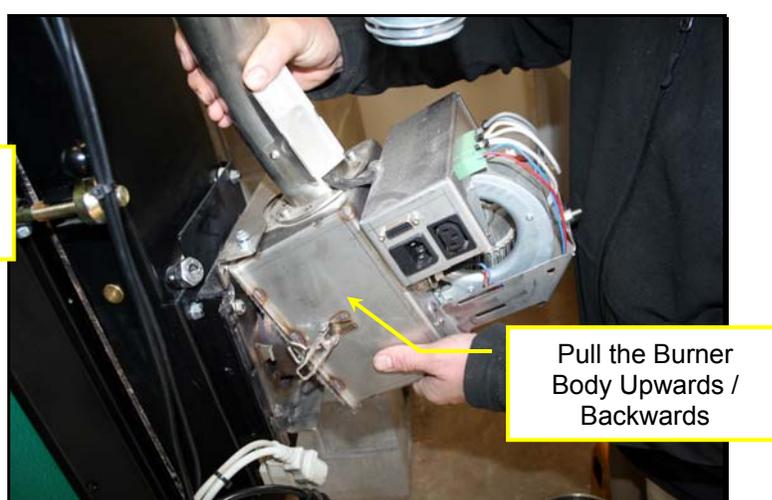
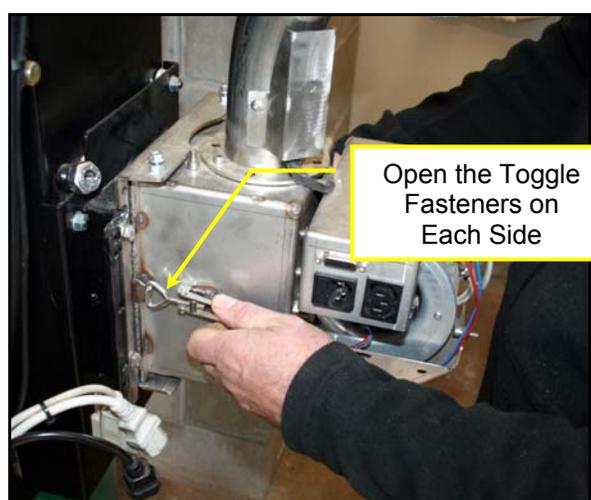
Cleaning the Space between the Mantle and the Combustion Chamber Tube

As described previously in **Removing Ash from the Combustion Chamber Tube**, turn off the power switch. Let the burner stop and cool down for a minimum of 15 minutes. Disconnect the connection cable to the burner's main power supply. The power cable to the auger feed screw and the control box cable must also be disconnected. Remove the pellet feed hose from the pellet feed tube / flame trap pipe.

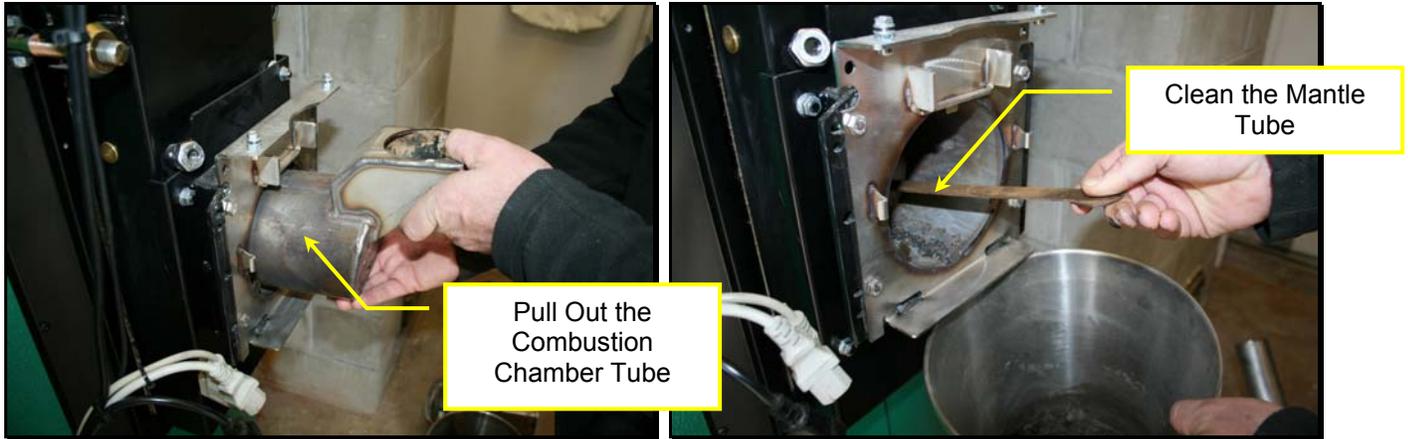
Remove the burner casing from the burner. Loosen the two upper nuts and remove the rear nut. Pull the casing backwards to remove it.



Open the two toggle fasteners, which position the burner body against the mantle's end plate. Angle the burner body and pull it inclined upwards / backwards so that the flame trap pipe releases from the combustion chamber tube.



Pull out the combustion chamber tube. (If needed, remove the stop plate in the combustion chamber tube and scrape off ash and slag with the supplied ash rake as described previously in **Removing Ash from the Combustion Chamber Tube**. Check that the air holes in the combustion chamber tube are free from residuals.) Clean the mantle tube using the ash rake.



Remount all components in reverse order. Remember to replace the stop plate in the combustion chamber tube. Check that the flame trap pipe is correctly positioned in the combustion chamber tube when the burner body is mounted. Connect the control box cable before connecting the main power supply and auger power cable. Reconnect the pellet feed hose from the pellet feed tube / flame trap pipe.

**WARNING**

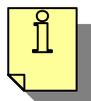
Ash must be kept in a fireproof, covered vessel until it is cooled down and you are sure that there is no glow left. NEVER use a household or shop vacuum cleaner to remove ash as the vacuum may catch fire due to hot ash. Specialized ash vacuums and ash attachments are available. Please contact your authorized PellX dealer.

3. Trouble Shooting



WARNING

If the ignition fails, do not open the fireplace door until the combustion chamber is totally ventilated! Wait at least 10 minutes after the third starting attempt. Wear protective clothing and eye protection as the door may be hot. Open the door slowly to prevent hot pellets or particles from flying out the door. Always disconnect the main power supply before working on the burner.



NOTE

The **Alarm / Test** light is confirmed (switched off) by turning off the power switch on the control box for a few seconds. Turn on the power switch. The control box is activated and the **Alarm / Test** light is now off.

LED	Indication	Possible Problem	Possible Solution - Contact your Contractor or Perform the Following Steps
	Failed to Start	<ul style="list-style-type: none"> Pellets not getting to the burner. Incorrect start portion. Broken or misaligned ignition element. 	<ul style="list-style-type: none"> Check pellet supply. Check for pellets hanging in pellet supply breaker. Check for clogs in screw auger. Check start portion, approximately 1-1/4 to 1-1/2 cups. Too much will cause 'boiler pops' - wood gas explosion! Check ignition element with test function 4. (Section 2.2) Disconnect feed screw and remove burner. Heating element should glow for about 2 minutes. A resistance check of the ignition element should be around 120 - 136 Ohms. Check to see if the ignition element's position is adjusted to be right up against the back of the combustion chamber. (Installation Manual - Section 7.2)

LED	Indication	Possible Problem	Possible Solution - Contact your Contractor or Perform the Following Steps
	Failed to run in Extra Safe Mode		<ul style="list-style-type: none"> Check pellet supply for clogs or bubble. Check start portion of pellets. (Section 2.2)

LED	Indication	Possible Problem	Possible Solution - Contact your Contractor or Perform the Following Steps
	Extra Safe Mode *	<ul style="list-style-type: none"> Triac temperature has exceeded 158° F (70° C) stopping the pellet feed temporarily. Interruption in the pellet feeding. Flame sensor dirty or faulty. 	<ul style="list-style-type: none"> Boiler is dirty, causing excessive back pressure. Clean the boiler. The maximum output is set too high. Reduce the output. (Section 2.2) Too much draft. Check the draft. Check pellet supply for clogs or bubble. Pellet screw auger angle too steep. (Installation Manual - Section 3.3) Replace the flame sensor. (Installation Manual - Section 7.4) Check flame sensor value. (Installation Manual - Section 5.1.6)

* Extra Safe Mode = Burner is forced to run at a reduced output (65%) because the flame sensor has lost signal during operation.

LED	Indication	Possible Problem	Possible Solution - Contact your Contractor or Perform the Following Steps
	No Power	Switch is Off	Turn Switch On
		Flame trap overheat protection tripped.	Boiler is dirty, causing excessive back pressure. Clean boiler and Reset the Overheat Protection on the Flame Trap Pipe. (Installation Manual - Section 7.1) Burner combustion chamber is clogged. Clean burner. Turn up air pressure on self cleaning. Decrease max run time between cleaning cycles. (Section 2.2) Check pellet quality. Reset the Overheat Protection on the Flame Trap Pipe. (Installation Manual - Section 7.1) Maximum output set too high. Reduce output. (Section 2.2) Reset the Overheat Protection on the Flame Trap Pipe. (Installation Manual - Section 7.1) Incorrect draft. Check draft. Reset the Overheat Protection on the Flame Trap Pipe. (Installation Manual - Section 7.1)
		High temperature limit switch tripped.	Check preset boiler temperature setting on PelIX controller. Reset high limit switch. Do not set high limit above 212° F (100° C).
		LWCO tripped.	Water level in boiler low. Determine cause. Fix the problem.
		Loose power or control plug.	Check plug and cords.
		Fuse blown on burner.	Check fuse. Determine cause. Replace fuse. (Section 1.5)
		House breaker box breaker tripped.	Check breaker. Determine cause. Replace breaker.

LED	Indication	Possible Problem	Possible Solution - Contact your Contractor or Perform the Following Steps
	<p>Test Mode (4 - 9)</p>	<p>Nothing is wrong. The operation switch is in test level (4 - 9). If the test button is pushed, the red light is also illuminated and the test function starts.</p>	<p>Put the operation switch in any of the operation levels (0 - 3). Turn the power switch off and then back on.</p>

LED	Indication	Possible Problem	Possible Solution - Contact your Contractor or Perform the Following Steps
	<p>Does Not Start</p>	<p>An interruption in the pellet feed.</p> <p>Start amount is too small.</p> <p>Out of pellets.</p>	<p>Check the pellet supply for clogs or a bubble.</p> <p>Tap the hose for pellets that may be hung up in the hose.</p> <p>Check the start amount and adjust as needed.</p> <p>Add pellets, refill the auger, and restart the burner.</p>

3.1 Trouble Shooting – Self Cleaning

Problem	Possible reason	Possible Solution - Contact your Contractor or Perform the Following Steps
<p>1. The combustion chamber tube is packed up with ashes much earlier than expected.</p>	<p>1. The Compressor has insufficient air pressure or is switched off.</p> <p>2. The ignition element is not in contact with the combustion chamber tube.</p> <p>3. One of the solenoid valves is stuck in the closed position.</p> <p>4. Bad pellet quality which sinters easily.</p>	<p>1. Adjust the pressure upwards on the compressor. Investigate why the compressor is switching off. The recommended pressure is 87 - 116 PSI / 6 - 8 BAR.</p> <p>2. Adjust according to the instructions from your local contractor.</p> <p>3. Check the function in test function 4, Self Cleaning Valve Test. If it doesn't work in spite of the fact that it gets tension, replace the whole unit. Don't try to repair the solenoid valve.</p> <p>4. We recommend using pellets with a minimum ash melting temperature of 1300° C.</p>
<p>2. The compressed air cleaning works continuously.</p>	<p>The two solenoid valves are stuck in the open position.</p>	<p>Check the function in test function # 4, Self Cleaning Valve Test.</p>

4. General Limited Liability & Indemnification

4.1 Indemnification

All claims made by third parties for personal injury or damage to property based on any act or omission to act on the part of the homeowner/ user or its unauthorized contractors, subcontractors or other agents, including any unauthorized service technician, with respect to the Product, shall be the sole and exclusive responsibility of the homeowner/ user or such other agent. The homeowner/ user shall indemnify and hold Gordic Environment AB harmless against any losses, damages and expenses arising out of or connected with any claim made against Gordic Environment AB for personal injury or property damage made by any third party against Gordic Environment AB based upon any act or omission to act on the part of the homeowner/ user or its agents with respect to the Product. Gordic Environment AB makes no warranty covering the use of the Product or its authorized distributors' or contractors' services beyond the limited warranty that accompanies the product.

4.2 Limitation of Liability

IN NO EVENT WILL GORDIC ENVIRONMENT AB OR ITS AUTHORIZED DISTRIBUTOR BE LIABLE FOR SPECIAL, INCIDENTAL, INDIRECT, CONSEQUENTIAL, RELIANCE OR EXEMPLARY DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS OR LOSS OF USE DAMAGES, EVEN IF GORDIC ENVIRONMENT AB HAS BEEN ADVISED OF THE POSSIBILITY OF THE SAME AND EVEN IF A REMEDY IS FOUND TO HAVE FAILED OF ITS ESSENTIAL PURPOSE.

5. Limited Warranty

Installed Product Limited Warranty -

Gordic Environment AB (the “Manufacturer”) warrants to the first end user and initial purchaser (the “Purchaser”) that the Product will substantially conform to its specifications, for a period of two (2) years from the date of installation of the pellet burner by the customer, as evidenced by the “Installation And Warranty Certificate”. If no Installation & Warranty Certificate is provided to Manufacturer, then the warranty period of two years shall commence on the date the Product was shipped from Manufacturer plus thirty (30) days. The “Product” refers to pellet burner, control box and auger produced by Manufacturer as sold and provided by Manufacturer or Manufacturer’s authorized distributors to the Purchaser, when such burner, control box and other equipment and accessories were included in the final inspection of the Product as installed at Purchaser’s premises.

The Product must be installed by an authorized installation contractor or Distributor in accordance with the PellX Installation Manual and the Purchaser’s premises must be inspected and approved by an authorized PellX installation contractor or Distributor before the Product is operated by Purchaser. Successful installation shall be verified by the Installation And Warranty Certificate, completed by the authorized PellX installation contractor or Distributor at the final inspection and test operation, and such Certificate shall be provided by the contractor to the Distributor or by the Distributor for registration of the Product with Manufacturer. Full completion of the Installation And Warranty Certificate and filing of the Certificate with the Manufacturer validates and commences this Limited Warranty.

The Purchaser shall retain its copy of the Installation And Warranty Certificate for any warranty claims. The Manufacturer must receive notice of any warranty claim within the two-year warranty period with a copy of the receipt for the purchase of the Product.

Any third party products, including but not limited to machinery, hardware and software, included with or purchased for use with the Manufacturer’s Products are not covered by this Manufacturer’s limited warranty and Manufacturer makes no representations or warranties on behalf of such third parties. Any warranty on such products is from the third party supplier or licensor of the product. Consumption items, including pellet fuel for the Product, are not covered by this Limited Warranty.

Component Parts 1-Year Limited Warranty -

All electrical component parts, including but not limited to ignition elements or igniters, blowers, wiring, vacuum switches, speed controls, switches, pilot assembly, valves, and thermostats are warranted to conform substantially to their specifications for a period of one (1) year. Replaced component parts are covered by this 1-year limited warranty only during the time remaining of the original limited warranty time period from the date of installation of the Product as described above.

Repair or Replacement -

If a Product shall be proved to Manufacturer's satisfaction to be defective, within the warranty period described above, Manufacturer's obligations under this Limited Warranty shall be limited to either repairing or replacing the Product, at Manufacturer's sole discretion, if such defect was caused solely by defective manufacture, workmanship and / or materials. Any and all labor costs and expenses are not included under this Limited Warranty and shall be paid by the Purchaser.

Provided, however, that such repair or replacement shall not include product removal costs, shipping costs to Manufacturer or its designated and authorized service contractor or Distributor, and re-installation costs of the Product. Such repair or replacement shall be Manufacturer's sole obligation and the Purchaser's exclusive remedy and shall be conditioned upon the Purchaser fulfilling its obligations hereunder.

Limitations On Warranty Coverage -

The Limited Warranty set forth above applies only to the Purchaser and does not apply to any later owner. Furthermore, the Limited Warranty applies only if:

- (1) The Purchaser has an original Installation Certificate for the Product, signed by an authorized PellIX installation contractor and presents a copy to Manufacturer;
- (2) The Product and its parts have not been repaired, altered or modified in any way by the Purchaser or any other person other than Manufacturer or Manufacturer's authorized representative. Repair, alteration or modification using original Manufacturer spare parts must be completed by Manufacturer or its authorized service center or provider; and
- (3) The Product and its parts are installed, handled, used, maintained and serviced in accordance with the PellIX Installation Manual, and the Operation and Maintenance Manual or any other Manufacturer's instructions furnished to the Purchaser; and
- (4) The Product has not been used for purposes other than or in a manner contrary to its intended use and normal use; and
- (5) The Product and its parts have not been damaged as a result of misuse, carelessness or negligence, improper handling, insufficient or defective maintenance, freezing, accident or faulty installation; and
- (6) The Product and its parts have not been damaged by the effects of dirt, salt, water, limescale, or abrasive cleaners.
- (7) The Product and its parts have not been damaged by acts of God, fire, flood, earthquake or other natural catastrophe, or any other circumstances outside the control of Manufacturer.

Warranty



Manufacturer DISCLAIMS ANY EXPRESS WARRANTY NOT PROVIDED HEREIN AND ANY IMPLIED WARRANTY, GUARANTY OR REPRESENTATION AS TO PERFORMANCE, QUALITY AND ABSENCE OF HIDDEN DEFECTS, AND ANY REMEDY FOR BREACH OF CONTRACT, WHICH BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION, OPERATION OF LAW, CUSTOM OF TRADE OR COURSE OF DEALING, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Manufacturer FURTHER DISCLAIMS ANY RESPONSIBILITY FOR LOSSES, EXPENSES, INCONVENIENCES, SPECIAL, INDIRECT, SECONDARY OR CONSEQUENTIAL, INCIDENTAL (INCLUDING DAMAGES FOR LOSS OF BUSINESS, LOSS OF PROFITS, AND CONTINGENT DAMAGES WHATSOEVER, INCLUDING DAMAGES ARISING FROM OWNERSHIP OR USE OF PRODUCT, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY OR OTHERWISE.

Manufacturer's LIABILITY ON ANY CLAIM OF ANY KIND, INCLUDING NEGLIGENCE, SHALL IN NO CASE EXCEED THE CONTRACT PRICE PAID BY THE PURCHASER FOR THE PRODUCT CLAIMED TO BE DEFECTIVE OR UNSUITABLE. Manufacturer SHALL NOT BE SUBJECT TO ANY OTHER OBLIGATIONS OR LIABILITIES, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES OF LAW, WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY Manufacturer, OR ANY UNDERTAKING, ACTS OR OMISSIONS RELATING THERETO.

Warranty Procedures -

To assure timely and fair processing of any Warranty Claim, the Purchaser shall follow these procedures:

1. Upon discovery of a defect or malfunction by the Purchaser, Purchaser shall notify the authorized installer or Distributor involved for his/her/its inspection.
2. If the authorized installer or Distributor finds that installation was proper, the installer or Distributor shall, if possible repair the Product, or send the defective Product or component part to the Manufacturer for investigation and possible repair or replacement.



6. Installation & Warranty Certificate

Distributor:

Affix sticker or stamp here or fill out the information below.

Name: _____

Address: _____

Address: _____

Fax: _____

Email: _____

Authorized Installer/ Contractor (if any):

Affix sticker or stamp here or fill out the information below.

Name: _____

Address: _____

Address: _____

Fax: _____

Email: _____

Manufacturer of PellIX®:

Gordic Environment AB

Box 11

SE-280 22 Vittsjö, Sweden

Fax: +46 451 238 81

E-mail: info@PellIX.com

This Warranty And Installation Certificate shall be completed by the installer, whom is either the Distributor or its authorized contractor. The Distributor or contractor shall provide the customer with a copy of the completed Certificate. If the Product is installed by a contractor, the contractor shall provide Distributor with a copy of the Certificate, and the Distributor shall provide Manufacturer with a copy of the Certificate in order to validate the customer's warranty coverage.



Date of final adjustment: _____ Product installed: _____

Series No: _____ Control Box Serial No: _____

Feed screw (model, diameter, length): _____

Boiler (manufacture / model): _____ Prod. year: _____

Chimney, material: _____ area: _____ length: _____

Draught restrictor (model, dimension): _____

Measured values					
Temperature outdoors		[°F]	Line voltage		[V]
Operation full effect:			[kW] (supplied)		
Flue gas temperature		[°F]			
CO ²		[%]			
O ²		[%]			
CO		[ppm]			
Chimney draught		[Pa]			
Adjusted with pellets (name / density / energy content):					
Set values on control box					
Used operation level (0, 1, 2, 3):			Stop temperature (boiler temp):		
		[°C]			
Set function	Display	Measured	Set function	Display	Measured
Fan High 7		[V]	Operation feed 8		[g]
			Start feed 9		[dl]

Installation address:

Name: _____

Address: _____

Telephone: _____

Inspected and tested by:

Name: _____

Address: _____

Telephone: _____

Signature: _____

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