



# PYRO FIRES

## OPERATING INSTRUCTIONS

Model: Pyro Mini Wood Burner (ULEB)

*Pyro fires are unique and work differently from other wood burners.  
Please take your time to read through these instructions to maximise the benefits of  
your new Pyro Ultra Low Emission Burner*

***Save these instructions for future reference.***



### IMPORTANT NOTE

*Pyro fires have been in production for more than 30 years. From experience, along with other New Zealand manufacturers, most issues relating to obtaining maximum efficiencies come from loading the fire with wet wood (more than 25% moisture content).  
The New Zealand Home Heating Association report that as much as 95% of complaints received are a result of poor fuel.*

***We strongly suggest you read the 'Firewood' section in this booklet.***

# PYRO MINI ULEB OPERATING INSTRUCTIONS

## FUEL TYPE: WOOD LOGS ONLY

These units are capable of continuous operation. Please use recommended fuels only.

Maximum fuel load is 4kg - **DO NOT EXCEED**

This appliance is **NOT** suitable for use in a shared flue.

This appliance should **NOT** be operated with the loading door open.

***WARNING: The appliance is designed to become hot during operation, care should be taken to avoid contact with external surfaces.***

The Pyro MINI has been tested to the following standards: AS/NZS4012:2014 \* AS/NZS4013:2014 \* AS/NZS2918:2001  
Environment Canterbury LEB Authorisation Number: 174996 Environment Canterbury ULEB Authorisation Number: 193584

Minimum safe distances from unprotected combustible materials:

Back - 350mm, Side - 480mm (See technical specifications sheet on protection measures).

***The appliance is not suitable for use in a shared flue system and should not be operated in a room with another combustion heater.***

***This appliance has not been tested as an Ultra Low Emission Burner with a wetback fitted***

***WARNING: There must not be an extractor fan in the same room or space as the appliance as it may cause the stove to emit fumes into the room.***

## IMPORTANT AND USEFUL INFORMATION

Thank you for purchasing a Pyro freestanding wood fire. At Pyro Fires, we take pride in manufacturing this high quality, ultra-low emission fire which has enjoyed over 30 years of proven reliability and high efficiency.

### WARNING:

- This appliance should only be installed by a trained and qualified installer.
- The appliance and flue system must be installed in accordance with AS/NZS 2918 and the appropriate requirements of relevant building codes.
- Appliances installed in accordance with this standard shall comply with the requirements of local standards where required by the regulatory authority. It shall display compliance tag reading "Tested to AS/NZS 4013"
- Any modification of the appliance that has not been approved in writing by the testing authority is in breach of the approval granted for compliance with local tested standards.
- Cracked and broken components e.g. glass or ceramic, may render the installation unsafe.
- Maintain a clearance of at least 1m between the front of the fire and building structure or any other substantial permanent combustible object.

To help you obtain all the benefits the Pyro offers, we ask you to ensure the following four important steps are performed:

1. Correctly complete your warranty card and return it to us either in person at our factory, or by mailing to:  
Pyro Fires Ltd  
PO Box 14057  
Hastings, 4159  
New Zealand  
or email to: [info@pyrofires.co.nz](mailto:info@pyrofires.co.nz)
2. The wood you use in the Pyro fire should be good quality, dry wood with a moisture content of 25% or less, 12% - 18% is ideal for clean, efficient heat. Digital moisture meters are available for purchase and recommended to test your wood fuel.
3. Please read this operating manual thoroughly as even individuals who have significant experience with wood fires will learn from this.
4. Before the start of the winter season, follow this maintenance checklist on your fire:
  - ✓ Have the flue professionally swept using a suitable sized brush.
  - ✓ Ensure the door seals sufficiently all the way around.
  - ✓ Ensure the door spindle lines up with the hole in the front plate when the door closes and that it is lubricated with grease.
  - ✓ Inspect the air tubes and load limiter assembly to ensure there are no cracks/holes that have appeared. If so, depending on the amount of wear, consider getting replacement air tubes installed.
  - ✓ Remove the front panel and ensure the three primary air inlets are clear.
  - ✓ Make sure the turboslide is sealing flush against the front plate of the fire by looking down the side of the decorative panel.

#### RE-USABLE FIRE STARTERS

The pack of two re-usable fire starters supplied with the fire should be used as follows:

Soak the firestarters in methylated spirits (meths) in a screw top jar. They soak up the meths like a sponge, turning purple. Use the firestarters in the fire just like you would with single use firestarters.

After loading your starting wood (3 pieces around 250mm long totalling around 1kg) first, then kindling (14-16 pieces totalling about 1kg) on top in a grid pattern, place the soaked firestarters on top of the kindling around the centre of the firebox. When you re-load the fire, you can retrieve the firestarters with tongs and **place them somewhere safe to cool – away from children and animals!** Of course, if the firestarters are still burning leave them in the fire until they are out. Let the firestarters cool and then, when **COLD**, simply place back into the jar of meths for future use.

Use suitable length tongs to place firestarters into the fire and to retrieve them.

If you forget to retrieve the firestarters don't worry as they will still be there, but continually leaving it in the fire will result in it eventually disappearing to nothing – like a piece of soap. By retrieving them from the fire early, they should last for quite a long time.

New firestarters can be purchased from Pyro Fires Ltd or your local dealer.

#### **WARNING:**

**NEVER** soak a **hot** firestarter in meths.

**NEVER** leave the meths jar near the fire.

**NEVER ADD SPIRIT TO A HOT CUBE**

**NEVER SQUIRT SPIRIT OR ANY LIQUID FUELS DIRECTLY INTO THE FIREBOX**

*Please note: It is not a requirement to use the Re-usable firelighters, single use firelighters may also be used however you may need more than two.*



## DIGITAL MOISTURE METER

The moisture meter is intended to be used regularly throughout the drying process, from when your wood fuel is delivered, right through to just before burning it. It measures the moisture content (%) in wood and is an essential tool as a fire owner. You **MUST** burn dry wood for your Pyro fire to operate effectively. Poor quality, wet wood is the most common cause of issues with all wood fires and flue systems.



## WARRANTY FORMS

Please ensure both copies of your warranty paperwork have been completed. Include your Pyro Fires retailer, fire installer, wetback installer/plumber (if applicable) and personal contact details. Keep one copy for your records and return one copy to:

Pyro Fires Ltd  
PO Box 14057  
Hastings, 4159  
New Zealand  
or email to: [info@pyrofires.co.nz](mailto:info@pyrofires.co.nz)

## FIREWOOD

Any wood burner that is not operating correctly creates high emissions and will not heat your home properly. Simple methods to ensure clean burning and efficient heating are:

- Stock up on your wood fuel at least 6-12 months before winter to allow the wood to air dry. Stack wood loosely in a dry place so air can pass freely through the pile.
- Burn dry, well-seasoned wood. Check your wood with the moisture meter supplied as longer drying times may be necessary.
- The ideal size of wood for a Pyro MINI is from 25mm-100mm (1" - 4") in diameter, cut into 250mm-300mm (10" - 12") lengths. *Shorter pieces are less convenient and less efficient to use. Let your wood merchant know what **you** want for **your** money.*
- Do not burn wet or green wood, plastic, domestic refuse, painted or chemically treated wood, plywood, driftwood, particle board or coal in your Pyro® as they will damage your fire and cause higher emissions of unburnt particles harmful to our environment.
- Burn small, hot fires near the back of the fire chamber.

## CAUTION:

THE USE OF SOME TYPES OF PRESERVATIVE-TREATED WOOD AS FUEL CAN BE HAZARDOUS.

DO NOT USE FLAMMABLE LIQUIDS OR AEROSOLS TO START OR REKINDLE THE FIRE.

DO NOT USE FLAMMABLE LIQUIDS OR AEROSOLS OR PLACE THESE IN THE VICINITY OF THIS APPLIANCE WHEN IT IS OPERATING.

DO NOT STORE FUEL WITHIN THE HEATER INSTALLATION CLEARANCES.

THIS APPLIANCE SHOULD NOT BE OPERATED WITH A CRACKED GLASS.

THIS APPLIANCE SHOULD BE MAINTAINED AND OPERATED AT ALL TIMES IN ACCORDANCE WITH THESE INSTRUCTIONS.

THERE SHOULD BE NO UNAUTHORIZED MODIFICATION OF THE APPLIANCE.

REPLACEMENT PARTS MUST BE GENUINE PYRO FIRES PARTS, OR THOSE RECOMMENDED BY THE MANUFACTURER.

\*Please see Pyro Fires Ltd warranty document for more detailed information.

# OPERATING, USE AND MAINTENANCE

## LIGHTING THE PYRO MINI FROM COLD

You will need an initial fuel load of 3 pieces of around 250mm long totalling around 1kg plus 14-16 pieces of kindling around 250mm long totalling about 1kg. Two Intermediate loads of 2 pieces totalling around a 1kg each pair and following on with main loads of 2 pieces totalling around 1.6kg

1. Soak the re-usable fire starters in methylated spirits.
2. Slide the turboslide to the far right or far left position.
3. Leaving a clear space in front of the air inlet hole, place a few small logs (1kg) lengthways in the fire chamber then stack a generous quantity (1kg) of DRY kindling on top in a lattice construction. e.g. two across then five lengthways, three across and five or six lengthways on top.
4. Place a pair of soaked (in methylated spirits) fire starters on top of the kindling midway back and side by side then light. Close the door checking that the turboslide is open to one side.
5. Once the fire is well established and there are almost no visible flames (around 35-40min), you will have a good bed of hot embers to place your next two pieces of intermediate wood on (1kg). Keep the turboslide open at this stage.
6. Repeat step 5. (another 35min or so) and after 10 minutes of the new load you can move the turboslide to the central position.
7. When the flames have died down again (around 30-35min), Your fire will be ready for a main fuel load. Load two larger pieces (around 1.6kg). When opening the door to load more wood, slide the turboslide to the far left or right open position and once the new load of fuel is well lit, return it to the middle position.
8. Each time when the flames have started to subside again you can add more main loads of fuel. The time between loads will vary depending on the density of your wood fuel. If the ember bed has built up much above the height of the bottom of the door, allow more time between loads.

The fire is now up to its operating temperature and refuelling will not be necessary for at least 45min to an hour but you could leave it considerably longer and then refuel the fire onto a low fire bed.

An important reminder; the fire will not burn correctly if you try starting fires with green or wet wood. The only fuel authorised for use with this appliance within Urban Clean Air Sheds and Smoke Control Zones is well-seasoned wood with a moisture content of 25% or less, 12-18% is ideal.

## REFUELLING ONTO A LOW FIREBED

The wood fuel inside a Pyro fire burns best on a bed of ash and hot coals. Refueling must be carried out onto a sufficient quantity of glowing embers so the new fuel load will ignite. With the turboslide open, add suitable kindling if necessary and intermediate sized pieces, close the door and allow the fire to burn with a bright flame for a while until the turboslide is not needed. Please note that if a new fuel load is left without suitable air for ignition then a buildup of unburnt volatile gases can occur. This puts stress on the unit, which can lead to an internal explosion when these gases do combust.

Always ensure adequate air via the turboslide for ignition and combustion of fuel. If there is insufficient burning material in the fire-bed to light new fuel, excessive smoke emission can occur, so you must light the fire as from cold.

## REFUELING and using the PYRO CURVED ASH RAKE

Refueling should take place only once the flames have died down (almost no visible flames). Use the ember rake if necessary to evenly distribute the hot embers and ash along the base of the fire chamber, ensuring there is enough hot ember at the front to provide adequate ignition to the fresh fuel load. Load the fuel so one end of each log is close to the back wall of the firebox. If you keep your fire burning under the air tubes, this will ensure the maximum amount of heat is captured within the ceramic cylinder.

*Please Note: Only use Pyro Fires tools as using others may cause damage to the cylinder. Always take care not to heavily impact the ceramic surface.*

## CONTINUOUS AND OVERNIGHT OPERATION

The Pyro® MINI acts as a heat store and small, hot fires store surplus heat in the ceramic cylinder. The unit then continues heating your home like an electric night storage heater. There are a few simple steps to follow to ensure your fire burns overnight with a solid ember bed for relighting the next morning. Firstly, make sure you have a hot, glowing ember bed all the way to the back of the firebox. Load the firebox with larger logs approximately 30 minutes before you retire. Open the turboslide to boost the air supply to the fresh fuel load if necessary. When hot, bright flames are well established, close the turboslide. In the morning, rake hot embers out of the ash to the front of the firebox. Remember to keep the turboslide hole clear to allow air in to rekindle the fire. Add kindling and a few larger pieces on top. With the turboslide open, you should have a roaring fire in less than 10 minutes. You may not be able to maintain an overnight fire with softer wood fuel.

## THE PYRO IS SELF-REGULATING.

The vigorous fire towards the front of the chamber automatically slows down as the burning advances towards the back of the fire chamber. Each cycle ends with ash and hot ember at the far end of the chamber. The Pyro® is designed to save on firewood and keep emission levels to a minimum by storing surplus heat in the cylinder, which normally goes up the flue. This heat is released into the room even when the fire is low at the end of each burn cycle.

## USE OF TURBOSLIDE

The turboslide covers a hole that allows start up air to enter quickly into the chamber to ignite your fire. To open the hole, move the turboslide to the left or right. When your fire is well established (40 – 60 minutes depending on wood type), slide the turboslide back into the middle position. Always keep a small area around the very front of the fire chamber free of ash and embers so the hole is clear and the turboslide can work effectively. Simply push back the build-up a little with the Pyro curved ash rake.

**Please note:** The turboslide is to be used only for the initial start-up of fires and to help ignite fresh fuel if required. By following these instructions, you will enjoy low emissions, high thermal efficiency and conserve your wood supply. Not following these instructions can result in higher emissions, damage to the air tubes inside the fire chamber and accelerated discolouration of your flue pipes.

## LOADING FIREWOOD

Do **NOT** try and insert wood sideways. The orientation of the Pyro's unique fire chamber ensures you can only insert firewood lengthwise. Burning wood end to end and along the grain like this is far more efficient than across the grain.



## **DOOR/DOORKNOB**

**DO NOT** run the fire with the door open. It will never reach the correct operating temperature, and this can be very dangerous.

The door seals with little pressure so please do not overtighten or it may be hard to open when the unit is hot. The door knob is a great indicator of what is going on inside your fire so if you find the door knob is too hot when you go to refuel, you are probably trying to refuel too early. Overtightening the door knob can also cause damage to the door gasket and fixing screws.

If your door knob is starting to show signs of charring or is getting loose, you are probably burning your fire too close to the door, overtightening the door knob and/or refueling the fire too early. Try closing the turboslide a little sooner and let the fire burn down more before reloading again.

Do not lean on the door or use it to help you stand when it is open as this can cause the door to move. If your door does become misaligned, loosen the bottom bolt of the hinge bar, slightly and lift the door back into the correct position then retighten the bolt.

## **AIR INLETS**

Do not block any fixed air inlets as this will affect the fire's performance and may cause permanent damage.

## **GREASING THE DOORKNOB SPINDLE**

A small amount of graphite grease should be applied to the spindle of the doorknob, usually twice a year is sufficient. Ashes from the fire have a gritty texture and over time this can cause wear on the doorknob spindle. Using a matchstick or cocktail stick, lubricate the groove in the first thread. Use the door grease sparingly as too much will melt and dribble, causing an unsightly stain. Remove any excess before relighting the unit.

## **CLEANING THE DOOR GLASS**

The air wash over the door should keep the glass clean. A dirty glass is a sign of a fire that is not getting hot enough, normally caused by trying to burn unseasoned or unsuitable wood. If your door glass needs cleaning, scrunch up two pieces of damp newspaper, dip one in cold fire ashes and rub over the inside of the glass. Use the other to rub over the glass to remove the dirt from the ash. Get into the habit of cleaning it regularly as this will maintain the glass and prevent ashes from fusing. Clean the glass when it is cooler, such as in the morning before rekindling the fire. If your fire is operating correctly, your door glass should have a light, white cloudy appearance.

*Please note: This appliance should not be operated with a cracked glass.*

## **FLUE CLEANING/CHIMNEY SWEEPS**

The Pyro flue will only clog up if you burn wet wood, fuel with an inadequate air supply, or if the fire chamber does not reach normal operating temperature. We recommend your flue be swept at least once a year, or more frequently if necessary (i.e. if you notice smoke coming out of the open door). Pyro fires are different from other wood fires and should be swept from the top down into a tray or bag at the bottom of the flue; if excess buildup has occurred then it may be necessary to remove the top plate from the fire to empty out the top chamber. Do not allow the chimney sweep to dismantle the flue or take the cooktop off unless they are sure they know what they are doing.

Please ensure whoever is sweeping your flue has watched our 'How to clean the flue of a Pyro fire' video online at <http://www.pyrofires.co.nz/resources/videos/>

*Please note: Before relighting the fire after a prolonged shutdown, check the flue for any blockages, such as birds nesting in the chimney.*

## **COOKING ON THE PYRO**

The top plate on the Pyro can be used as a cooking surface directly as a hob. Anything you would normally cook on your conventional appliance can be cooked on the Pyro and with the right amount of trial and experimentation we hope you will enjoy this and further save on resources.

*Note; There is a risk to the cosmetic finish of the product if used as a cooktop due to the chance of spills etc. this is to be expected and most often can be cleaned up by having a hot bright fire and burning off any deposits from the top plate.*

# LIGHTING YOUR FIRST FIRE

Do not be alarmed if your fire does not perform to your expectations the first time it is lit from new. It can take several fires to fully cure the ceramic cylinder and build up an ash bed before full performance can be achieved. You may even notice a small amount of moisture appear under your fire on the hearth, this is completely normal.

Allow adequate ventilation when you light your fire for the first time as smoke and fumes are released as the special heat-resistant paint cures. This will not last long and should not happen again.

## TROUBLESHOOTING

*If your query is not listed below, visit the 'Help Centre' at [www.pyrofires.co.nz](http://www.pyrofires.co.nz).*

### SLOW START-UP

- Open the turboslide by moving it to either the left or right position.
- Check the start-up hole (behind the turboslide, inside the chamber) is free of ash and char and scrape back any build-up.
- Check for air leakage around the cooktop, around the flue collar, and in the flue pipe joints. Air bypassing the fire chamber reduces draft. Repair air leaks.
- This could be from using large or wet logs, or loading fuel on too few hot coals. Use dry kindling to start the fire quickly. Do **not** use wet fuel (see the *Firewood* section in this booklet for more information).
- Insufficient draft: Review chimney construction and investigate air pressure levels in the home.
- Warm, humid conditions outside or an inversion layer: Wait until the flue pipe is hot.

### DENSE SMOKE

This is likely caused from the burning of plastic materials, fire retardant treated wood or high resin content wet wood. Burn only well-seasoned wood and ensure it is positioned lengthwise in the cylinder.

### EARLY MORNING PALE BLUE SMOKE

This is caused by burning off small creosote deposits formed by premature banking of the fire the night before.

### SMOKE ENTERING THE ROOM

- Negative pressure in the room, possibly caused by a household electric exhaust fan or severe pressure difference in a windstorm: Open a window to equalise the pressure.
- Severe down draft due to surrounding structures, hills, trees or roof layout. If you think your home is suffering from down draft, download the troubleshooting info sheet from our website – [www.pyrofires.co.nz](http://www.pyrofires.co.nz).
- Flue is clogged: Clear the obstruction and investigate the cause.

### GASES & SMOKE ENTERING THE ROOM WHEN THE DOOR IS OPENED

- The most common cause of this issue is a clogged flue. Get a sweep in to clean your flue, ensuring whoever is sweeping the flue has watched the *Flue Cleaning* help video online at <http://www.pyrofires.co.nz/resources/videos/>
- Opening the door during the maximum degassing of fuel. Wait until the flames disappear.
- This can also be indicative of a very cold flue temperature. Allow the initial startup fire to warm the flue pipes.

### HIGH FUEL CONSUMPTION

- Loading door is not airtight: Check the gasket.
- Incorrect operation: The Pyro is a heat store, so try adding logs less often and burn the fuel further back in the fire chamber.
- You might be leaving the turboslide open for longer periods than intended. The turboslide should only be used when lighting and establishing the fire and for igniting a new fuel load.
- High flue draw: investigate cause and consider an H type cowl if consumption is excessive.



# TROUBLESHOOTING

## DOORKNOB LOOSE?

The expected lifespan of a doorknob is somewhere between 4 - 10 years depending on how the fire is operated. There are two typical causes that lead to premature failure of the doorknob:

1. Charring on the back of the knob due to high levels of concentrated heat from over-firing. Over-firing can occur when the turboslide is left open too long or is held off the face of the starting air hole with ash or embers. Over-firing can also occur when the door is not sealing due to a damaged rope seal or glass gasket.
2. The door being overtightened when it is closed which in turn leads to it being very tight to open once the fire is hot. Continued overtightening causes the screws to weaken and then come loose and break away from their fixings.

To avoid these issues and extend the lifespan of the doorknob, keep a clear area of approximately 10cm in the front of the fire chamber and maintain your fire underneath the air tubes. This will give you the additional benefit of letting the cylinder absorb the maximum amount of heat from your fuel load. Only turn the door knob enough for the rope to make light contact between the seal and the front plate. Further cranking of the door knob will result in the weakening of the screws holding the door knob on.

## CRACKS IN THE FIRE CHAMBER

Due to the fire chamber being cast as a one-piece cylinder it goes through some expansion and contraction every time it is heat cycled and this results in different levels of cracking. This is just the cylinder relieving its inert tension and has no effect on the operation, performance, or useful life of the unit. For more information on this topic, watch our 'Why are there cracks in my cylinder?' video, online at <http://www.pyrofires.co.nz/resources/videos/>

## AVOIDING BACK PUFFING OR MINOR GAS EXPLOSIONS

- Hot embers should be brought forward to ensure ignition starts at the front of the new fuel load. Use the ash rake as per the operating instructions on page 8 of this booklet.
- Turboslide not opened or blocked after reloading large logs onto a small ember bed. A good bed of coals is needed to ensure the ignition of a fresh fuel load and use of the turboslide is necessary to provide extra air until the flames are well established.
- Wood fuel which is too wet for burning. Split a large log and spike the center with a moisture meter. Moisture content should be less than 25%, ideally 12% - 18%.
- An explosive substance such as a battery or aerosol container loaded into the fire chamber. This is **VERY** dangerous, do **NOT** do this.

## DOOR LOCK HARD TO OPERATE

- Apply a small amount of high temperature grease to the thread as per instructions on page 9. Grease with graphite or molybdenum disulphide only.
- You may be overtightening the door spindle thread. The door on a Pyro seals with minimum pressure. Do **not** overtighten this door as this will shorten the life of the handle and gasket.

## ASH SPILLS & DE-ASHING

Make sure you have a metal (non-combustible) ash container with a lid and store it outside on concrete or bare ground. Use the Pyro shovel to empty the fire chamber when it is cool. Be careful as ash almost always contains some hot ember. **Never** use a vacuum cleaner. *Pot ash can be great for your garden if your soils are acidic. Use only ash from a cooled fire which used good quality wood.*

# SAFETY NOTES

## FIRES CAN BE DANGEROUS

Always use a fireguard in the presence of children, the elderly or the infirm. In New Zealand and Australia, AS/NZS 2918:2001 guidelines should be followed. In the UK the fireguard should be manufactured in accordance with BS 6539 – Fireguards for use with solid fuel appliances.

## OVERFIRING

It is almost impossible to overfire your Pyro fire beyond its design capacity as the firebox will withstand temperatures in excess of 1500°C. However, if any part of the unit starts to glow red, ensure the turboslide is closed and allow the fire to die down. You will be unable to refuel it during this period due to high temperatures around the loading door.

## FUME EMISSION

If properly installed and operated, this appliance will not emit fumes. Persistent fume emission must not be tolerated as it indicates a problem and the following actions must be taken:

- Open doors and windows to ventilate the room.
- Let the fire die out or safely remove and dispose of the fuel in the appliance.
- Check the chimney for blockage and clean if required.
- If necessary, seek professional advice.

## IN THE EVENT OF A FLUE/CHIMNEY FIRE

- Raise the alarm and let others in the house know.
- Call the relevant emergency services.
- Move furniture and rugs away from the appliance if possible.
- Get out.

Thank you for purchasing a Pyro fire, we hope it fulfils all your expectations and more!

### Manufactured by:

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