

The Evolution of Wood Heaters

Wood has always been a low cost heating fuel, however in the 70s electricity came to the fore, and then also oil and gas appliances with the advantage of instant action and low cost as well. But, cheap oil and gas did not last long. The home heating industry made tremendous technological advances and once more wood heaters present a low cost viable option to whole home heaters.

It should be remembered that controlled combustion wood heaters can heat your whole home. They are not just room heaters like gas and electric units.

We do not recommend that home owners use open brick chimneys as a heating source. While they may provide an ambience that other forms of heating cannot, they are very inefficient and high polluters of our environment.

New insert type heaters tested and approved to Australia's tough air pollution standards are available in many different sizes and are designed to fit into your existing brick chimney to change it from an "old wood hungry" low heat output fire to a modern fuel efficient and low pollution wood heater. These types of insert type wood heaters have almost exactly the same efficiencies of their free standing brothers.



Types of Heaters

Convection Heaters are designed with air cavities around the outside of the firebox and then a decorative outer casing. These outer casings may be tiled, heat proof glass or painted or enamelled metal sides. The air rises between the two surfaces and expands, drawing more air from below and forcing the heated air out through the top of the cavity.

A new high technology clean burning wood heater can produce over 3 cubic metres of heated air per minute. This is why convection heaters are suited to conventional Australian homes with hallways and separate rooms. Safety is an important aspect of convection heaters to families with children as the double walled outer casings keep the external panels cooler.

Fan Forced Heaters are usually a convection style heater with a 2 or 3 speed blower fitted to increase the speed of the normal convection process and are ideal for larger homes where air movement is a priority.

Radiant Heaters are those where all sides of the firebox are exposed and are ideal for large open areas where heat can travel in a straight line, such as large family rooms, showrooms or pool rooms. They are the least expensive form of wood heaters.

Choosing the Heater Best for You

Our trained specialists know your local conditions and in most cases can visit your home and give on the spot advice to supplying the best size and type of heater for your home and budget. In general though there are a few simple factors you need to consider.

Always consider safety first. Only purchase a wood heater manufactured by a member of the Australian Home Heating Association. That way you can be sure it has been manufactured to all the rigorous Australian standards that apply to wood heaters.

Consider your heating needs and the output of the models you are looking at. Heat is rated in kilowatts. How many kilowatts you need will depend on where you are in Australia, the size of your home, how much glass area there is and if you have home insulation.

For example, an 18 square house that is well insulated will require a lower output than the same home with no insulation. We recommend that heaters should be sized to accommodate the average rather than the extreme temperatures. You can make a room too hot and uncomfortable by installing a heater too big for your needs. Get the advice of your local association member listed in these pages.

The key to clean and efficient wood heating is not just installing an efficient wood heater, it is also operating the heater correctly. This means getting a good, hot fire going as quickly as possible and maintaining this for the heating period. This is relatively simple to do with modern, efficient appliances, as long as fuel is sufficiently dry and the heater is lit and loaded correctly and well maintained. Efficient burning only occurs when adequate air is supplied to the fuel. This means that during starting and reloading, all air inlets must be fully open.

Every heater has slightly different characteristics, so read and follow any instruction from the manufacturer carefully. If you are not satisfied with the performance of your heater, check with the retailers - there is almost always a simple reason why you are not getting a good performance.

It may be something as simple as poor quality wood.

Getting Started

- Use kindling wood, paper and firelighters to get the fire started. Large pieces of wood can then be added after a hot bed of coals has been established.
- Leave air controls open for at least 20-30 minutes to start the fire burning. You can expect some smoke from your flue when you first start, but it should not last longer than 10-15 minutes.

Fuelling Your Fire

- Most heaters burn better with 3 or 4 logs rather than 1 or 2. Logs should not be too big - 2 to 4kg for 40cm logs is typical.
- Heaters without grates will perform better with a layer of ash on the base of the firebox, and should only need cleaning periodically. When cleaning out the ash always leave 10mm or so behind.
- Every time you add fuel to your fire, leave air controls open for 15-20 minutes to start wood burning properly, then keep your fire burning at a steady rate.
- To obtain complete burning, you need a high temperature and enough air flow so coals and flames glow brightly. Dark, smoldering wood and a lot of smoke are signs of poor and incomplete burning and insufficient air intake.
- Never use petrol, oil or kerosene to help light the fire. They could cause an explosion.

Overnight Burning

- For overnight burning, load the heater at least half an hour before going to bed. Only turn the air supply down to minimum once all the wood is charred (about 15-20 minutes) to avoid creosote problems. Most heaters should still burn for eight hours without difficulty and you will have far less creosote problems than if you fill the heater and turn it to slow-burn straight away. However, long periods of slow burning will always produce more creosote than burning on medium or high. It will probably take you some time to get the "feel" of operating your heater for long periods. You might even find that once you have a good lighting method worked out and your house is well insulated you don't need to burn overnight except on the coldest nights.

Buying Fuel

- For the best results, always use the type of fuel recommended by the manufacturer. If your heater meets the national emission standard, it will have a compliance plate which specifies the correct fuel to use.

If Buying Wood

- Place your orders early with a reputable fuel merchant, preferably one who is a member of The Australian Home Heating Association.
- Be sure of what you are buying or collecting in firewood.
- Moisture content should be in the range of 12-20%. Hence the need to buy in summer months and stack in an air-dry mode, e.g. roof cover, open sides.
- In defined areas, firewood must be sold by weight, so don't pay for excess weight in water.
- Elsewhere, firewood is often sold in volume, eg. A cubic metre or in some cases, a cubic yard, i.e. cage, bin or loader bucket, etc.

Money Saving Tips

Getting the best performance from your fuel and appliance will save you money each year.

- Obtain expert advice on solid fuel appliances. Retailers who are members of The Australian Home Heating Association can provide helpful advice.
- Make your home more energy efficient by insulating the ceilings and walls.
- Prevent heat leaks through cracks in doors and windows.
- Reduce heat loss through windows by drawing heavy curtains at night.
- Leaving the firebox door open will affect the efficiency and reduce the heat output of your heater.

Reducing Smoke Emissions

- Allow full air for 15-20 minutes after each refueling.
- Do not close down air supply totally overnight - a little air avoids a lot of smoke.

Buying and Installing Solid Fuel Appliances

- Whatever the age of your solid fuel appliance, use it correctly to reduce the need for repairs and servicing.
- Always buy the right size heater. A heater that is too large for an area will have to be turned down too often and too small a heater can result in over-firing, shortening the life of the heater.
- Install all appliances correctly - choose a qualified installer, Heatworks install heaters to meet all current standards and we guarantee it.

Service and Maintenance

- Service your heater during Spring or early Summer. This minimises the corrosive effects of creosote residue and condensation during the off-season.
- Check the condition of the heater and flue, door seals, baffles, etc.
- Check for bird nests in or near the flue system in the roof cavity.
- If loose insulation has been added to the ceiling, i.e., blow-in cellulose, etc., check carefully that none has built up in the flue cavity clearance area. or alternatively...
- Get an early bird service call from a Heatworks installer/service person – we are members of the Australian Home Heating Association.

Flue Checks

- Your wood heater should be serviced once a year and you should have your flue cleaned regularly by Heatworks service dept
- Creosote is a substance formed by solid fuel combustion. Creosote and resin build-up can cause flue fires.
- Check the flue prior to each winter. Make it a habit to look outside and check your flue for smoke. If it is smoking excessively, you are wasting fuel and heat and may be causing unnecessary emissions. You need to increase the air supply to the fire. A little air avoids a lot of smoke.

member



Information shown here has been sourced with thanks from the Australian Home Heating Association

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