Central Heating
NEW ZEALAND

USING RADIATORS WITH WETBACK FIRES

The joy of fire with the comfort of central heating.

Heating Radiators with Fire

Log burners are commonly available with a wetback system that heats a hot water cylinder. It's possible to extend the functionality of the wetback by using radiators to spread the heat to other parts of the house. This means you can get the pleasure of watching a fire burn in your living room while the rest of the home is brought to a comfortable temperature by the radiators.

People often try to move the hot air from a fire into other parts of the house with duct work. Moving heat with water is so much more effective as water transports energy four times better than air.

- Heat more of your home with your fire
- Radiators available in a variety of styles and endless colour options
- Using a cheap and reliable source of firewood means no additional fuel costs

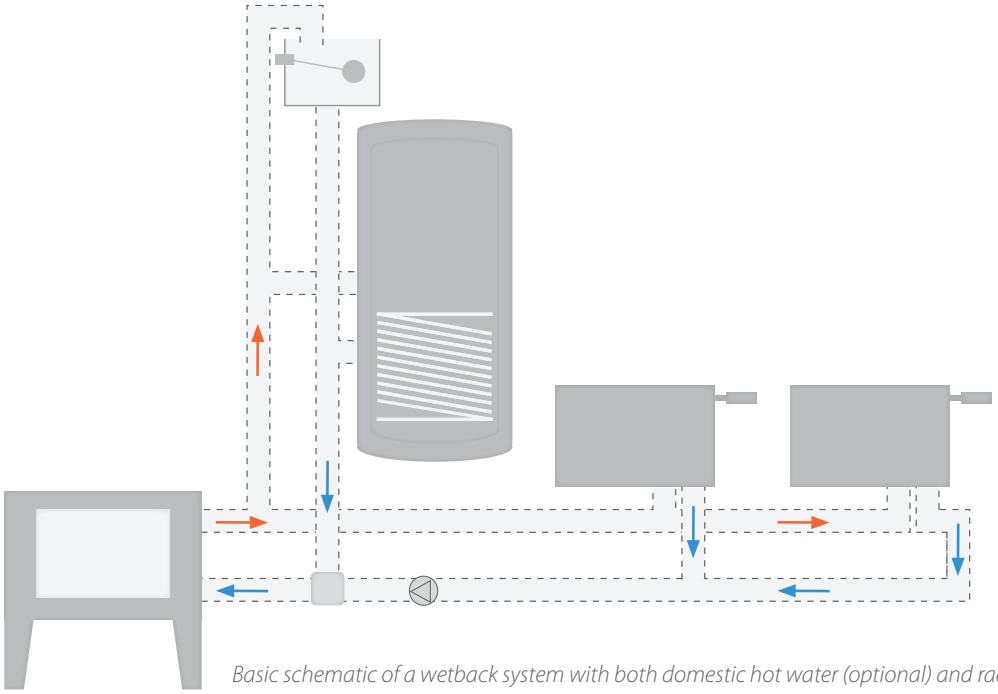
The number of radiators you can heat depends on the heat output of the wetback and the rating of the radiators. A typical wetback only provides 2 to 4kW of heat as this is all that is needed to heat a hot water cylinder if the fire is on for five to ten hours per day. In order to heat a central heating system, a wetback with a higher output is often required. There are fires that have larger wetbacks (up to 15kW) and put out more heat to the wetback, enabling more radiators to be connected.

How It Works

While the fire is burning, the heat from the combustion process heats water jackets installed within the firebox. The water circulating through these jackets moves through pipes and to a hot water cylinder.

Traditionally, the water in a wetback system relies on thermo-siphoning (warm water rising and cool water falling to create a natural flow) to circulate so the system is not dependent on electricity. Consequently, it is best for a hot water cylinder to be directly above the heat source.

Central Heating New Zealand advises including a circulating pump to help move the warm water to the radiators, which makes the transfer of heat more effective than thermo-siphoning alone and means that the radiators can be further away from the heat source.



Basic schematic of a wetback system with both domestic hot water (optional) and radiators

Design Considerations

All pipework connected to a wetback must be copper to protect against damage should the system overheat.

Because conventional wetback hot water systems have no form of control and are designed to boil the water in the hot water cylinder if there is excess heat, wetback radiator systems need a way to get rid of excess heat if it gets too hot. A feed and expansion tank should be installed to allow the water to boil off from the radiator circuit and cool.

Available Radiators

For more information on available radiators, please request our radiator brochure or visit us online.