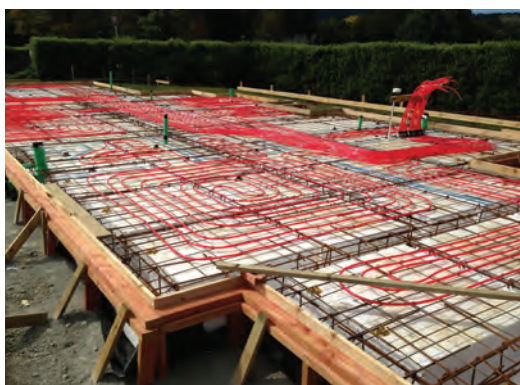


# Build Smarter, Talk to us First!

Heat Pump Powered  
Floor Heating &  
Domestic Hot Water

For over a quarter  
of a century we  
have specialised  
in radiant heated  
floors, with over 2000  
homes in Otago,  
Southland and  
South Canterbury



[www.warmandcool.co.nz](http://www.warmandcool.co.nz)



# A better way to warm your world, make your home a heater.

## Floor Heating suitable for:

- Vinyl planking & Hardwood floors
- Other wood floors - talk to us

Water-fed radiant floors warm from the floor up as opposed to most other forms of heating that heat the building from the ceiling down to the floor, this takes about 30% more energy costing you more money?

Radiant energy heats the floor, the carpet, the furniture, the walls and you, rather than heating the air.



### Reasons to choose Air to Water Heat Pumps

- Radiant floors can operate with 30% less energy than hot air system when maintaining constant room temperatures at 2.4m stud height, even more with higher ceiling.
- Radiant heated floors when designed for air to water heat pumps mean the heat pump only needs to heat water to approx 38°C, this means very high operating efficiency.
- With the advent of high quality air to water heat pumps, \$1 of energy can regularly purchase you over \$4.20 of heat at a power price of 26¢ kW, so you only pay about 6¢ per kW of energy. This is approx a 1/3 of the diesel price and even better when compared with LPG.
- Heat pumps have very low maintenance when compared with other energy sources.
- The more expensive energy gets, the return on investment from an aerothermal heat pump becomes even more attractive as the savings grow more rapidly.
- European Emmeti SunFlow Branz appraised systems available.
- Radiant water feed floor systems future proof your building for advancement in energy technology.
- Radiant heated buildings have less airborne dust from carpets and furnishings than buildings heated with hot convected air.
- Radiant heated buildings can be ventilated more effectively with less loss of energy. Better suited for Heat Recovery Ventilation.
- Radiant heated floors also create a healthy environment as dust mites etc cannot live in the floor coverings due to lack of moisture.
- Individual rooms can be controllable (talk to us about your requirements).
- All pipes used by Warm and Cool are Euro spec multi layered oxygen barriered.
- Your systems can have cooling units added from the same heat pump.
- Your systems can have domestic hot water added heating water for one third of the normal energy cost.



**Request a Solar PV Systems brochure or a Heat Recovery & L**

# The advantages of Air to Water Heat Pumps (Aerothermal)

Heat Pumps offer many advantages over other sources of heating - returning up to and beyond 420% giving very high energy gains (that's \$1 of power to \$4.20 of heat).

Warm and Cool supplies and services a wide range of the market leading hot water heat pumps throughout the Otago, Central Otago, Southland and South Canterbury regions.

The same air to water heat pump that heats your home can also be used to heat your domestic hot water, swimming pool and spa.

## Advantages

- Solar Energy Assist on winter afternoons, 1kW into heat pump equals about 4kW out (request a Solar PV System brochure or phone us 03 453 1010).
- We have available cold weather heat pumps with full output down to -10°C.
- Ground recovery systems are expensive to purchase and install and require larger circulation pumps. Unlike Europe and North America, our outdoor air temperature does not warrant such expensive systems for domestic purposes. Local average temperatures for June, July & August: Dunedin 7.3°, Queenstown 4.9°, Invercargill 6°.
- Air to water heat pumps are simple to install and servicing - no earthworks required.
- Heating needed in the South for at least 8 months of the year, over this period the average temperatures: Dunedin 11.2°, Queenstown 8.5°, Tekapo 6.5°.
- We also design and install air to water heat pumps for radiator systems.
- Some of our heat pumps monitor outdoor temperature. All our systems monitor slab temperature, room temperature and provide temperature changes to ensure maximum home heating efficiency.



Insulated heated floor retrofitted into a home

## Retrofitting to existing homes

Heat Pump powered insulated floor can be retrofitted into existing homes.



Standard control panel with domestic hot water



# Air to Water Heat Pumps - Aerothermal advantages and applications:

## Efficient, Low-cost energy

The same technology employed in air to air heat pumps delivers even higher efficiency and extraordinary economy through air to water systems. Even at sub-zero temperatures, aerothermal operational efficiency remains very high. Rooms are split into separate control zones and some rooms can be shut off or temperature adjusted as required to ensure maximum home heating efficiency. Talk to us about hybrid homes also a speciality, combining solar collectors with the above and hot water heat pumps.

## Ecological

Because South Island electricity is derived primarily from green hydro and wind generation, the CO<sub>2</sub> emissions are almost nil. There are no pollutants given off from heat pumps, just air – and we employ non-ozone depleting, environmentally friendly R 410A or R32 gas.

## Simplicity

Heat pumps are simple to operate. Our systems are easily programmed and tells the heat pump exactly what to do and when to do it (video tutorials are available on our website. Heat pumps are also very low maintenance – unlike most boiler systems.

## The benefit of radiant heat

Radiant floors distribute heat evenly across the room for high personal comfort. Because there's no air movement, there are no drafts around your feet or down your neck. It's like soaking up the sunshine on a summers day. They maintain better humidity levels than a hot air system making for a more healthy comfortable home.

## Healthy, Clean and Quiet

Effective radiant heat requires lower air temperatures to maintain comfort levels which results in lower energy losses, this is due to long-wave radiant heat not leaking from your home as quickly as short-wave hot air heat convection. Less convected air means less airborne dust and lower dust mite levels as the floor environment is too dry for them to flourish – a more healthy environment, particularly for those with respiratory problems. Also option as hot air is not the primary means of heating, less energy is lost when ventilating your home. Best to marry to a heat recovery system.

## Complete Air-conditioning

Our floor heating radiant systems can be combined with fancoil radiators and ceiling units to provide year round comfort – with the ability to heat or cool all from the one system. Some of our air to water heat pumps can supply a fancoil ceiling cassette unit with hot or cold water, to provide short term heating or cooling through summer or this system is very suited to the addition of solar panels, 1kW solar = 4.2kW energy.

## Domestic Hot Water Heating

The same heat pump that heats your floor can also be diverted to heat our Duplex stainless steel hot water cylinders (10 year warranty). The high electrical efficiency of some of our units, results for around the same annual savings as a solar system – a 65-70% reduction in power. We can also heat swimming pools and Spas off your radiant floor heat pump.

## Safe and Space Saving

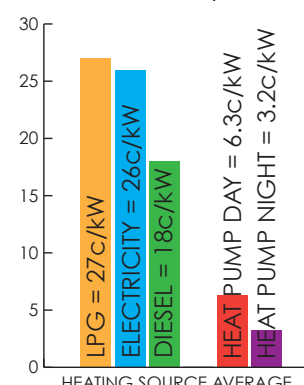
Every additional square metre of floor space will cost you around \$2,000. Our aerothermal heat pump unit sits outside your home and does not require any floor space at all. The control system fits neatly onto or into a wall and the pipes are hidden in the floor so that there are no dangerous hot surfaces, furniture can also be placed anywhere you want

## Floor Heating Future Proof Your Home

Energy prices will rise at different times of the day in the future. By heating your floor we can simply turn your heat pump off during these high power charges. A slab can also store energy meaning better use of cheap night rates.

### Approx. cost per kW heat delivered

(cents/kW) in Dunedin as at February 2019



Showroom 223 Kaikorai Valley Road, Dunedin.

Open 9am to 5.00pm or by appointment

56 McNulty Road, Cromwell

Servicing Otago, Southland & South Canterbury for over 26 years

[www.warmandcool.co.nz](http://www.warmandcool.co.nz)

FLOOR HEATING 18/06/20

Dunedin  
Central Otago

Ph: 03 453 1010  
Ph: 03 442 0813