KE KELIT®
CLIMATE CONTROL SYSTEMS

Central Heating & Cooling

Hot Water Heat Pumps

Why Choose Central Heating?

In recent years central heating has been widely acknowledged as the most effective and efficient method of heating.

Central heating offers superior efficiency which means that your running costs will be significantly lowered. Central heating offers homeowners ongoing savings on their energy bills which quickly outweigh the initial outlay.

In the UK, Europe and Northern America, central heating is the standard method of home heating because it keeps your whole home at a comfortable temperature year round, while remaining extremely affordable.

Benefits at a Glance

Efficient

Central heating systems require much less energy to heat homes because water holds significant amounts of energy and transfers energy extremely well, resulting in economical operation and lower energy consumption in the form of much friendlier power/gas bills.

Healthy

Central heating provides your home with even, radiant heat with no cold spots. No forced air circulation means no dust or allergens are distributed making central heating the healthier choice and ideal for people who suffer from allergies.

What is Central Heating?

Central heating is a heating system that heats your home from one central point and then circulates that heat to rooms within your home.

KE KELIT Climate Control specialise in 'hydronic central heating.' This is when a central heat source, such as a hot water heat pump, heats water in a discrete location within your home. For example, your garage or laundry room.

The heated water is then circulated silently through a network of pipes connected to an underfloor heating system and/or a convector heating system. Resulting in a comfortable, energy efficient and healthy home. Central heating can also heat your hot water cylinder, providing your home with optimal levels of hot water, all year long.

Comfort

Central heating warms your whole home through silent, radiant heat delivered through underfloor heating, and or convectors. Such radiant warmth is affordable luxury when delivered through a well-designed and easy to use programmable control system.

European Quality

Although not mandatory in New Zealand our central heating systems designed in accordance with European standards provide optimised performance, reduce energy consumption and CO_2 emissions and provide ultimate climate control.

Weather Compensation

All KE KELIT Climate Control heating systems are required to be installed with a weather compensating outdoor temperature sensor.

Weather compensation is when a small temperature sensor is located on the outside of the building, on a south facing wall (coldest side of the house). This is wired to the internal controls of the heat source and information about the outside temperature is sent to the heat source controller constantly.

When the temperature changes outside the heat source responds and starts to increase or decrease the heating water temperature to compensate. This pro-active mechanism means that people inside the building won't even notice that the temperature has changed outside.

For example, when the outside temperature drops at night, more heat is lost through the walls of the building. Because the outdoor sensor detects the fall as soon as it happens, the heat source is able to raise the heating water temperature and keep the inside temperature stable. With a conventional system, the temperature is dependent on a room thermostat, which will only take effect after the inside of the building has become too hot or too cold.

Homeowner Benefits

Lower Bills

Save up to 15% of your annual bill - that's on top of the savings you'll make by changing a conventional heat source for a high efficiency hot water heat pump.

A Comfortable Home

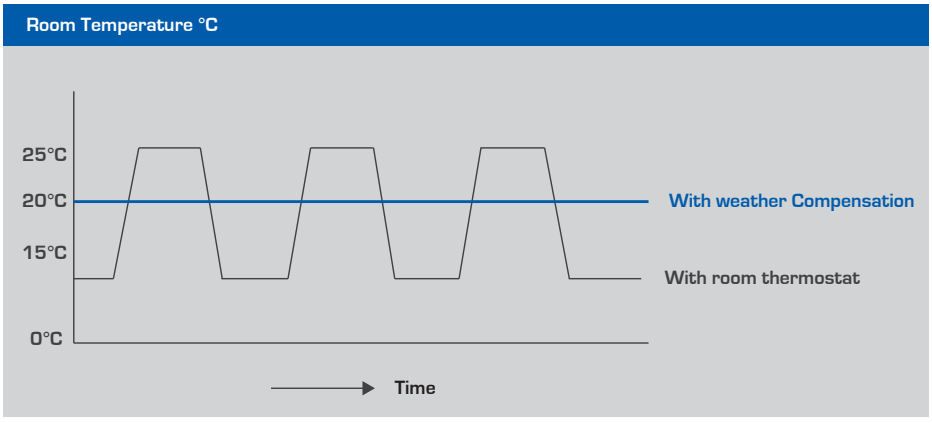
A constant temperature is maintained inside, despite the changing weather.

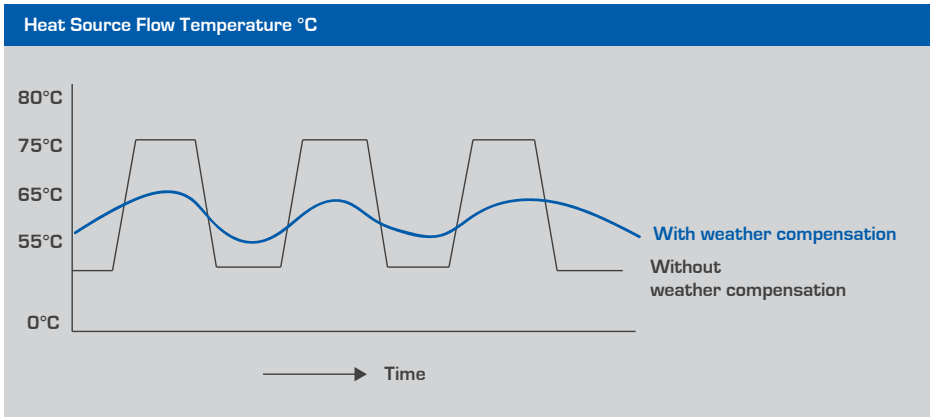
You Won't Notice the Changes

With central heating you won't notice the weather compensation control working, you will simply feel a very consistent and comfortable room temperature.

If convectors are incorporated into your central heating system, you may notice changes to your convector temperature automatically changing as the outside temperature increases and decreases to maintain the desired room temperature.

Weather compensation controls work by ensuring that the heat source uses the exact energy required to match the heat lost from the building. Your house will always be warm (at the desired temperature) and will never be too hot or too cold.





Heating & Cooling - Powered by Mitsubishi

Mitsubishi ECODAN heat pumps are one of the most efficient heat sources available for a home heating/ cooling system. With the option of a 200 litre hot water cylinder, the ECODAN can provide heating and hot water to your home

Mitsubishi Electrics range of ECODAN air source heat pumps use the latest heat pump technology to provide low cost, low carbon heating and hot water for your home, all year round.

Super quiet to run with low maintenance, ECODAN air source heat pumps are quick and easy to install as they are self-contained units only requiring electricity, with no need for gas supplies, flues or ventilation.

The ECODAN heat pump is the perfect heat source for your homes hot water supply, underfloor heating systems, COOLFIX ceiling heating and cooling systems and iVECTOR heating and cooling convectors.

Underfloor Heating

The main advantage of underfloor heating is its high level of performance. Radiant heat means that the warmth is concentrated where you need it most. Room temperatures higher up are usually around 2°C lower than at floor level. So it's perfect for human comfort - you won't get cold feet and you will keep a cool head!

It's a highly controllable heat too. You can make each room a separate zone, varying heat output according to the time of day and location. You'll enjoy uniform heat even in the largest rooms, with no cold spots and no draughts caused by air circulation. It's even good for furniture, with its gentler, more even heat and smaller variations in humidity!

Underfloor heating is extremely discrete. With nothing showing above floor level, it does not interfere with either your living space or your décor. This leaves you free to make the most of every square foot of your floor and wall space.

COOLFIX - Ceiling Heating & Cooling

Thanks to the outstanding level of radiation in ceiling heating and cooling systems, it is possible to create a pleasant climate in living and working spaces even where temperature differences are minor.

KE KELIT creates systems that can ensure long-term cost savings and energy efficiency as well as the use of renewable energy, and also offers the right product for every construction situation: whether near the surface, in the concrete core or suspended in various designs, COOLFIX is always the perfect solution.

The COOLFIX ceiling heating/cooling systems is not visible within the room, leaving you with maximum design freedom while still maintaining total home comfort.

COOLFIX offers quiet and draught-free operation with no uncomfortable cold zones, due to fast temperature adaption and a balanced temperature throughout the room.

iVECTOR - Heating & Cooling Convectors

New and improved, the latest generation of iVECTOR is even more quiet, more efficient and more intelligent than ever before.

The iVECTOR has a large surface heat exchanger and has a low water content. This feature combined with forced convection from its in-built fan, produces high heat outputs rapidly.

When connected to a chilled water supply, the iVECTOR can rapidly cool spaces as well. Offering you a comfortable climate within your home, throughout the year.

Air/Dirt Separators

Air and dirt separators protect the boilers, pumps and fittings from damage caused by the deposit of dirt particles, increase comfort and improve the yield. Air and dirt separators also offer benefits in the event of application in old systems or when an open system is converted to a closed system.

Systems in which the water is properly de-aerated and free of contamination are more efficient, produce less noise and have a longer service life. Flamco's range of products use proven and innovative technology to remove air and solid particles from the water.

System Protection

ADEY's advanced chemical range has been created to provide a solution for the maintenance and protection of central heating systems.

With a dual biocide formulation, MC10+ tackles algae and biological contamination with ease. Extra concentrated, containing two active ingredients, it's more effective than single biocide products when it comes to preventing the problems that arise in underfloor heating.

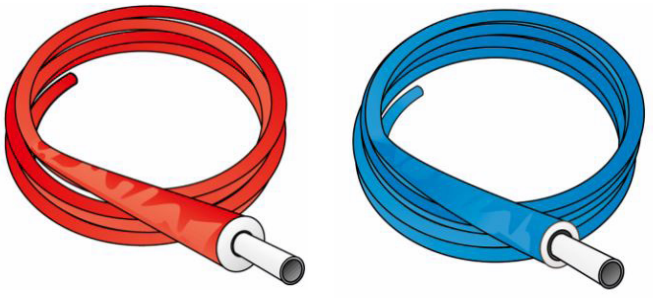
One 500ml bottle will provide effective long-term treatment for 100 litres. MC10+ can also be used to provide sanitisation when commissioning or cleansing a heating system.

Piping System

KE KELIT's KELOX pipe is one of the highest-quality European piping systems available in New Zealand.

Your heating system will be connected together using KELOX Multilayer pipe. KELOX Multilayer pipes are low weight and are impermeable to water vapour and oxygen. Available as naked pipe or soft foam insulated pipe coils (option of 4mm, 9mm or 13mm insulated coils). Insulated pipes offer resistance to heat loss and improve the efficiency of your heating system.

KELOX Multilayer pipe comes with a 25 year warranty. Please contact KE KELIT for more details on this warranty.



Design Approach

Choosing a Central Heating System

The first step is to have a conversation about your expectations and what's important to you. During this process, the central heating system including the heat source that is best suited to you, your family and your home will become clear.

Central Heating Costs

Once this initial consultation is completed you will receive in writing a summary of the central heating system discussed that is most suited to you, estimated operating costs and estimated system costs.

Bringing Your Heating System to Life

Depending on the requirements of your home and system we will then proceed to either a full design with one of our design engineers or put you in touch with an installer who can go through the design process with you.

Design Standards

KE KELIT CLIMATE CONTROL designs are always completed in accordance with the following standards to provide assurance that the performance outputs of the system will be satisfied.

- Radiator heating design with VDI 6030
- Heat load in accordance with EN 12831
- Underfloor heating design with EN 1264
- Pipe network with EnEv 2009

It is recommended that when designing radiator heating systems the use of sophisticated thermal simulation software and adherence to these standards is incorporated to ensure correct performance

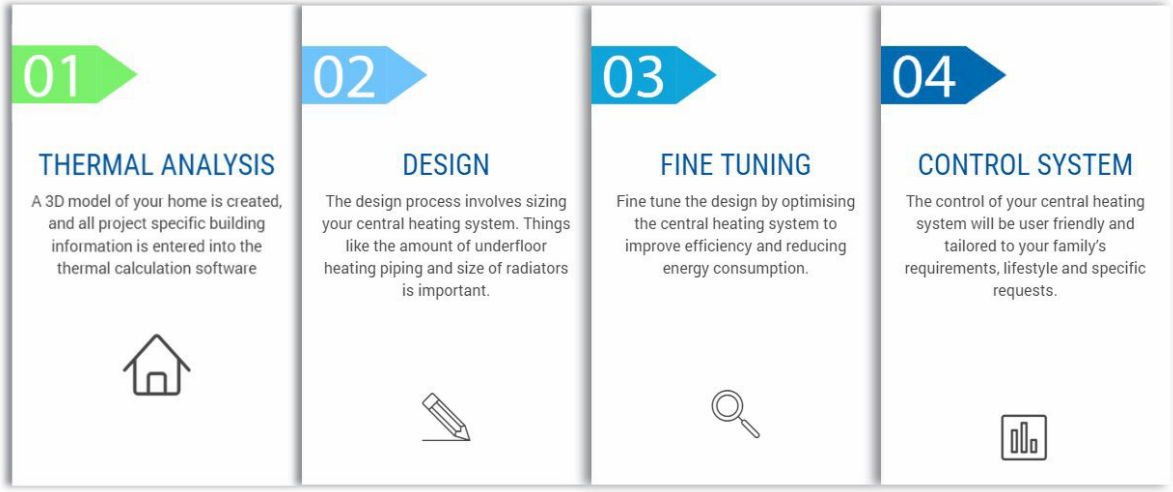
Design Process

The KE KELIT Climate Control team of design engineers will require a set of house plans. This won't be a problem for new builds, however accurate plans for existing homes can be a bit harder to come by.

In these instances when accurate plans are not available we will arrange with you a time that is convenient to come and measure up your home. During this visit we capture specific details about your home that are required to complete the design process.

Once we have your house plans, we can start the four-step design process, as pictured below. The whole design process is completed in accordance with European central heating standards and once completed all design data and verification reports are available in addition to system design and installation drawings.

Contact KE KELIT Climate Control or your local installer to start this process and become one step closer to achieving total home comfort: climatecontrol@kekelit.co.nz



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