



your total **heating** solution



PLUMBCRAFT
Your Total Pipework Solution

Design, supply and installation of heating systems

Underfloor heating has been used since the time of the Roman Empire. The Romans discovered that if the floor is heated during the day it radiates that heat back into the room when the room air temperature cools.

The radiant heat from underfloor heating provides a healthy home environment for your family, gives greater overall comfort and lower running costs compared to other heating systems.

Underfloor heating works by circulating warm water through a network of polyethylene pipes laid in the floor, gently spreading heat through the house or building. As the pipe network covers the entire floor area for even heat distribution throughout - you have a system that is comfortable, safe, economical, gives you design freedom and is virtually maintenance free.

If you are building the house of your dreams you owe it to yourself to install the best heating system available. Plumbcraft will work with you to design and install the system most appropriate for your needs.



WHICH SYSTEM?

RATING ***** 1 star = poor 5 star = excellent	PERFORMANCE CHARACTERISTICS				
	Temperature control	Quiet	Low Emissions Environmentally Friendly	New Homes/ Buildings	Existing Homes/ Buildings
Hydronic Underfloor System	*****	*****	*****	*****	N/A
Solar Underfloor System	**	*****	*****	*****	N/A
Solar System for Hot Water Heating	*****	*****	*****	*****	*****
Gas Boilers for Combination Systems	*****	*****	*****	*****	*****
Diesel Boilers for Combination Systems	*****	*****	***	*****	*****

comfortable economical
flexible safe healthy

Underfloor Heating

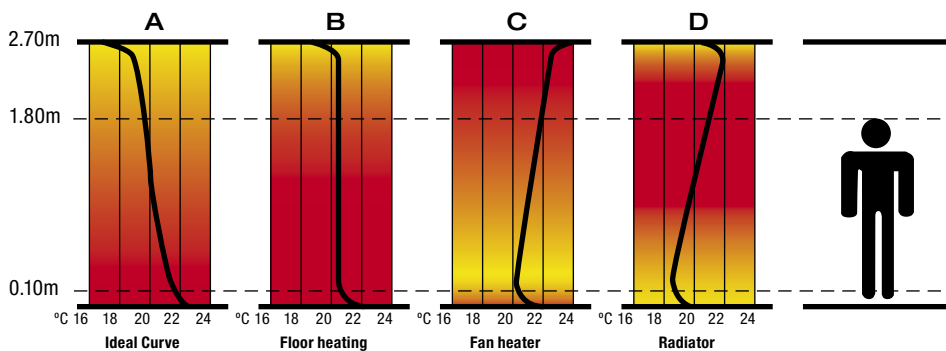
Enjoy greater . . .

Comfort

Underfloor heating creates a feeling of well being, as it gently warms your environment. It produces a high level of radiant heat without causing the dryness usually associated with high intensity systems.

Modern control systems enable underfloor heating to provide just the right amount of heat, at the right time and in the right place, controlled by room thermostats.

The system is designed to run at a much more constant level than other heating methods.



Flexibility

Radiant wall heaters take up valuable room space, imposing design constraints and difficulties when cleaning, painting or wallpapering rooms. With underfloor heating, a new approach to room and building design can be taken, with the freedom to try new looks and ideas. With no radiant wall heaters or visible pipework, you can use the whole room to place furniture or appliances wherever you wish.

When using underfloor heating, your choice of flooring becomes wider. Hard floor finishes, such as stone and tile, lose their disadvantage and suddenly become comfortable, as well as long lasting.

Economy

You won't waste money heating the airspace over your head. All the heat is generated underfloor and distributed exactly where you need it. As the whole floor area acts as a giant heating element, the water temperature circulating in the system can be kept much lower, ideal for the latest high efficiency boilers which give maximum savings from low return water temperatures.

The system is almost zero maintenance. The pipes are made from tough and robust polyethylene therefore are corrosion free and resistant to scale buildup.

Safe and Healthy

Underfloor heating means no hot, hard-edged wall or free standing heaters on which young and old could injure themselves. Of particular benefit to asthma and allergy sufferers the warm and dry floors help inhibit the growth of house dust mites.



Total Comfort Systems

How Hydronic Underfloor Heating Works

Tubing is laid into the concrete slab when the building is constructed. This tubing is connected to a boiler through the control manifold. Warm water is pumped silently through the tubing which raises the temperature of the slab to achieve a gentle radiation of heat into living areas.

With underfloor heating it is more practical to maintain the slab at a constant temperature. It is important to remember that the nature of underfloor heating means that it takes longer for the temperature to change than with other systems. The temperature can be controlled with control systems ranging from a single controller for the whole home to individual controllers to suit your personal requirements.



Hydronic Underfloor Heating

Plumbcraft uses only premium quality European pipework products. These are sourced through reputable New Zealand agents with whom Plumbcraft has developed strong business relationships.

With our suppliers manufacturing expertise and proven track record, together with Plumbcraft's skills and experience, you can be assured of professional design and installation of your residential or commercial underfloor heating system.

aquatherm®
Underfloor Heating

FERROLI

REHAU®

Combining Hot Water & Underfloor Heating From One Source

The Combi System uses underfloor heating to provide the most comfortable form of heating available to the modern home, fully integrated with the heating system is the hot water production. These systems provide large amounts of hot water at high flow rates. Due to the efficiency of the boiler system running costs are kept to a minimum.

Hot water production

Boiler heating systems can be used to produce tap and shower hot water. The advantage of combining heating and hot water production is the utilisation of the cheaper fuel for the production of hot water, and an increased efficiency gained from the boiler system.

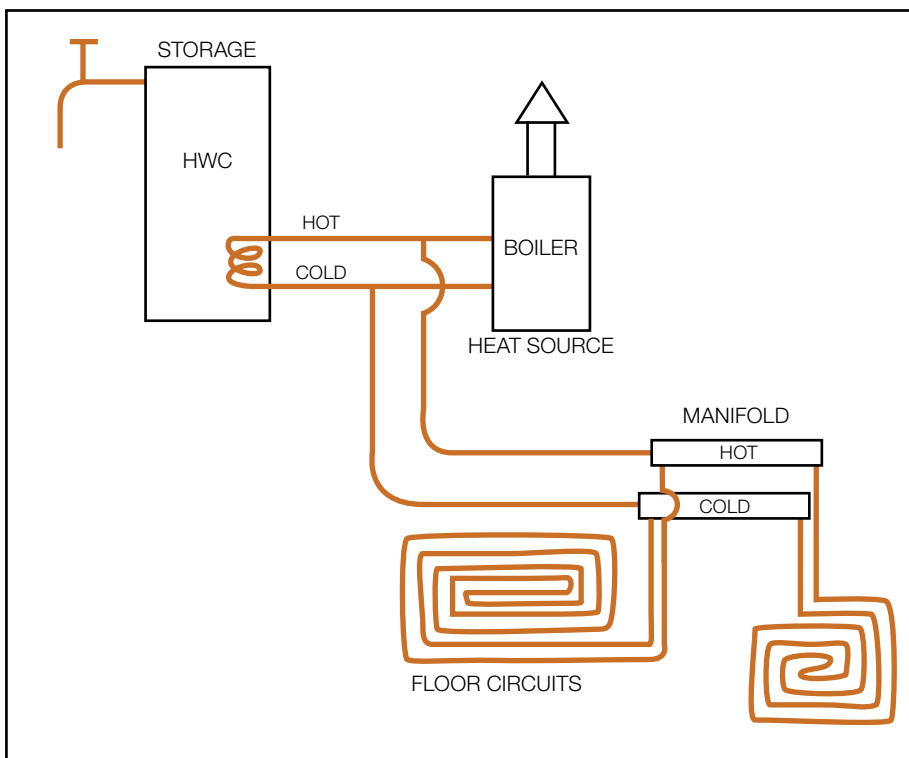
The boiler is the heart of any heating system. It heats the water and pumps it silently around the heating circuit where the heat is distributed through the house or building. Boilers are ideally suited to multi tasking amongst many jobs. We can supply either gas or diesel boilers.

Operating on gas, the near silent operation gives enough power to heat a small to medium sized house. A specially designed heat exchanger and burner system gives over 90% efficiency at very low pollution levels. All gas wall hung boilers have many safety features which ensure total security in operation. The boiler (pictured) can be installed either in the garage or inside the house.

If diesel is the preferred fuel, the modern diesel boiler is quiet, clean, and efficient. Diesel boilers incorporate a three pass heat exchanger giving over 90% efficiency and very low pollution, exceeding standards for pollution control. The low water content boiler which allows for the installation of a very powerful boiler in a compact space. The diesel boiler series are ideal for installation in a garage or shed.



Combi System



Solar Underfloor System

Floor heating from the sun's power

How the underfloor system works

The underfloor system is suitable for concrete floors and consists of two floor circuits. One circuit is installed in the hard fill and another in the concrete floor. In addition a circuit is fitted under the roof connected to a pump and a thermostat. As the sun heats the roof, the fluid in the roof circuit is also warmed and circulated to the under-floor circuits, heating the concrete slab - the system then becomes a massive solar-powered night store heater.

Tubing placed in the hard fill under the concrete, radiates gentle warmth into the fill, which is transferred evenly through the floor. During the summer months, this can be diverted under a swimming pool or deep down into the hard fill, conserving energy for the winter.

Heat is distributed gently and evenly throughout the whole house or building - no more cold rooms. Just gentle, constant warmth where you need it.

The system is totally hidden, fully automatic and is one of New Zealand's safest heating systems. There is no pollution - no smoke or gas. There is less condensation on walls and windows resulting in a drier and healthier home.

And best of all it is very economical – being heated by sun.

The system provides background heat only and additional heating will generally be required during the winter months. The system's performance is affected by weather conditions, house design/construction, insulation, orientation and the lifestyle of the occupants. Large windows facing the winter sun (north) and a dark steel roof (facing north) as a collection area will greatly assist in the operation of the system.



Water Heating

The Solar system

Installing a solar hotwater system can reduce your hot water power account by up to one-third. With its eco friendly European design and advanced technology a Plumbcraft installed hotwater system offers superior performance with minimum maintenance

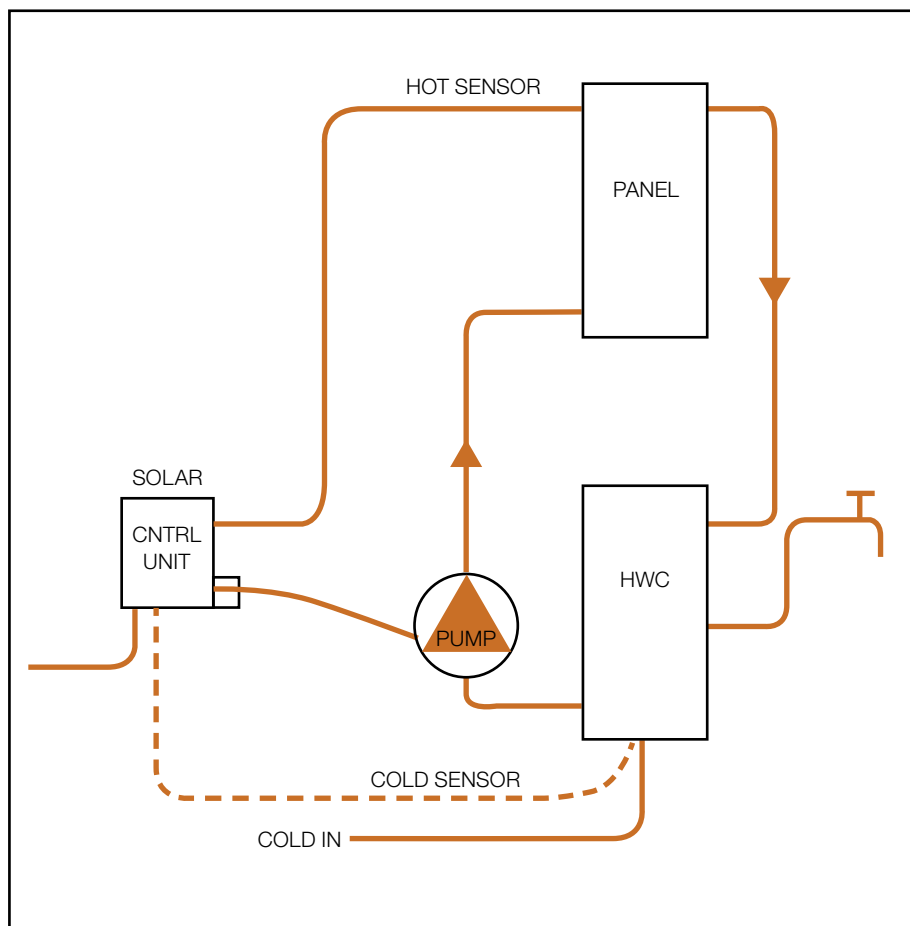
With two types of systems you have the opportunity to choose the system that is best suited to your home or building.

Active solar systems

Also known as pumped systems, use a small pump to circulate the heated water from the collectors to the hot water cylinder.

Passive solar systems

Also known as a thermosyphon solar system. Passive solar systems utilise the natural raising of hot water and falling of cold water to move the heated water from the solar collectors to the hot water cylinder that is mounted higher than the collectors. Passive solar systems have no moving mechanical parts.



Solar systems work best on a north facing roof. They suit new homes and buildings but can also be retro fitted to existing buildings with mains or low water pressure hot water cylinders. The solar panels can be attached to all types of roofing material. As a rule of thumb, 1 square metre of solar panels will heat enough hot water for 1 adult per day. An adult will use on average 70-80 litres of hot water per day.



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