Collins Plumbing, Gas & Heating

- STEPS TO -

Economic Home Heating Solutions

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BOSCH Invented for life

REHAU Unlimited Polymer Solutions

brivis Climate Systems

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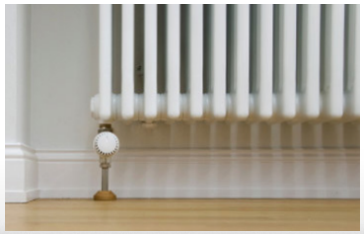
SUNZ

1. House Plan
2. How do we heat this home?
3. Heat Retention calculation
4. What are the Heating options?

HYDRONIC
IN-FLOOR/WALL

DUCTED CENTRAL
WARM AIR



RADIATORS
HYDRONIC TYPE

SOLAR OPTION
ADD ON

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ECONOMIC HOME HEATING SOLUTIONS

HYDRONIC: In-floor/Wall

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Hydronic In-floor/Wall

This system is usually built in while building the home. It can; however be a retrofit system if major renovations are taking place.

This requires pipes being built into the floors, walls or ceilings. Then hot water is pumped through these pipes to radiate warmth into the areas needing heating.

The Heating Unit can be placed anywhere from a cupboard to the garage depending on space/size needed. Many designers are now incorporating a plant room into the build to accommodate this componentry, but this isn't necessary.

The Heating Unit for any Hydronic Systems can be;

- *Air-to-Water Heatpump*
- *Round source Heatpump*
- *Gas*
- *Wood pellet*
- *Diesel*
- *Coal boiler*
- *Coal*

This system can be a heating/cooling and potable hot water duel system.

This system can also have a Solar System combination to maximise savings on hot water generation.

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DUCTED CENTRAL: Warm Air

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Ducted Warm Air System

This system uses a unit that heats fresh air that is then pushed around the home via ducting.

Vents are place around the home into every room that needs to be heated.

There is only one unit used for this simple system that can be used for new buildings but also retrofit.

The Brivis unit offers the complete package for this system.

This system provides heating only. It is not a heating and hot water duel system.

This system cannot be incorporated with a Solar Hot Water System.

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RADIATORS

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Radiators

Radiator System has a calculated size/number of radiators placed around the home in every room to be heated.

This system can be built in when building a new home or be a retrofit system when renovating.

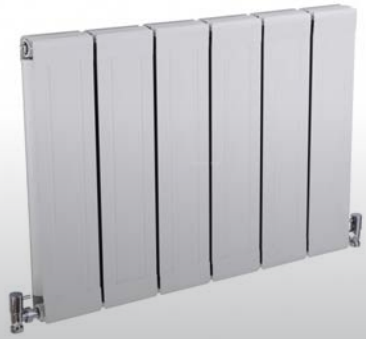
The unit for this can be placed in a convenient location.

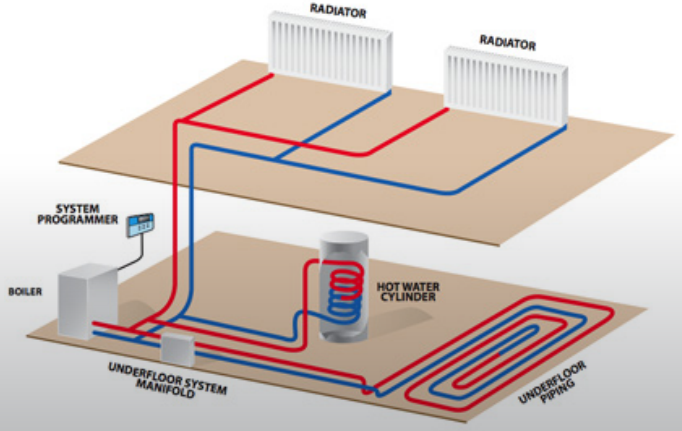
The Heating Unit for a Radiator system could be;

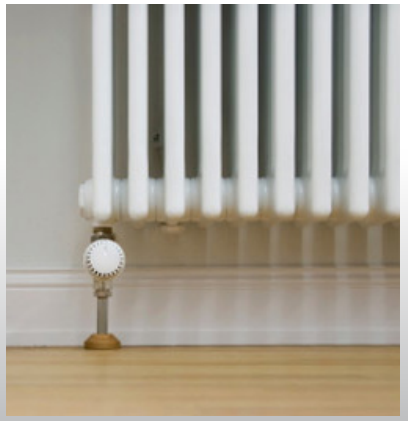
- *Wood pellet*
- *Coal*
- *Gas*
- *Diesel*

This system can be a heating and potable hot water duel system.

This system can also have a Solar System combination to maximise savings on hot water generation.







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SOLAR OPTION: Add On

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Solar Hot Water Heating System

A Solar Hot Water system can be a stand-alone system that heats hot water for potable hot water usage.

A solar hot water system can be installed in a new building or retrofit.

Depending on the type of hot water cylinder that is available in the home already it can be installed straight into the existing cylinder in the home.

A Solar Hot Water System can be in combination with a heating system depending on the type of system and unit that is used.

A Solar Hot Water System always needs a backup heating device for heating Hot Water.

This would be an electric element, boiler, etc. This would only be used when absolutely necessary.

PV-T Technology *(Electricity & Solar hot water hybrid panel)*

Front side of PV-T panel collects solar radiation and generates electricity and heat.

The high efficiency copper flat-plate solar collector on the back of the PV-T panel collects the heat and transports it away using a liquid coolant.

Dual solar collection –2 usable energy outputs with one collection system.

Improved PV generation–up to 50% more electricity than an equivalent conventional PV system with same peak output.

Lower installation cost than an equivalent performance system comprised of a separate Solar PV and Solar thermal systems.

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General Information

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1 Relivance of House Plan

When thinking about the overall plan of your home one of the main priority inputs need to be the heating and cooling and potable hot water generation for your home. Make sure you think about it while you are planning your home.

Insulation, building materials, and window quality, etc. all play a huge part in heating, cooling and heat retention which all adds up to the comfort you will enjoy in your home.

A heating/cooling system works best when incorporated into the design of your home to give maximum effect rather than attempting to lay a heating system over the top of finished plans.

A heating system can be a step by step build sequence as well as a one off build depending on your budget spend ideas, needs and timing of the build. It can be future proofed by setting up or incorporating piping/ducting that can be hooked up later, for either, extra heating/cooling, solar heating, swimming pool heating etc.

Talking with our Heating Expert as early as possible can give valuable insights into where to spend your money to give maximum heating/cooling results with minimum monetary outlay.

2 How do we heat this home?

Every dwelling is different, every client's ideas are different and there are a number of different systems and heating units that are used to heat a home.

However with all these factors the main point of heating a home is to have a warm home that is fully controllable and also very energy efficient.

Depending on the Heat Retention Calculation, the design and build of the project and also the needs and wishes of clients, there are a number of systems and units that we use to heat a home.

We give expert advice on all of the above based on; The Heat Retention Calculation and our Heating Expertise!

3 What is a Heat Retention Calculation?

A Heat Retention Calculation is a specific calculation using the individual plans supplied via architects engineers, designers or clients. It is carried out by our Master German Heating Engineer.

This calculation arrives at the precise kilowatts that are needed to heat every room in the dwelling to a comfortable level, while using as little fuel as possible, thus saving energy.

This calculation gives information for the correct sizing of the Heating Unit to be used.

To sum up the calculation is the foundation of the heating system.

It ensures that when the heating system is turned on you have a high preforming heating system that has low running costs. There is no over expenditure and no under or over sizing of any componentry or Heating Unit.