



r.e.s

Renewable Equipment Solutions



HEAT PUMPS



UNDERFLOOR HEATING



RADIATORS



SOLAR PV



BATTERY STORAGE



CAR CHARGING POINT



WHO WE ARE

Working with specialist manufacturers, Renewable Equipment Solutions provide a complete range of renewable and energy efficient heating and hot water solutions to homes and businesses across the UK. So whether it's heat pumps, underfloor heating, solar PV or electric vehicle points, we can offer a fully integrated renewable package to provide energy efficient sustainable solutions. As a member of the nationally recognized quality assurance Microgeneration Certification Scheme (MCS), customers can feel confident they are investing not only in the best technology but in a company with a proven track record. Our professional team comprises of experienced technicians, system designers, sales and marketing personnel who have many years experience, and understand how to specify and implement complete renewable solutions.

“RES can assist installers and their customers to take advantage of the Boiler Upgrade Scheme (BUS) by supplying the products and technical support required to deliver a Microgeneration Certification Scheme (MCS) accredited air or ground source heat pump installation.”

Shane Oxberry Managing Director RES Distribution



WHAT WE OFFER

RES specializes in the design and supply of heating systems primarily using Heat pumps and underfloor heating along with other energy efficient heat emitters. We provide domestic and commercial solutions for customers with projects such as new builds, renovations, barn conversions, apartments, offices and even schools and nursing homes.

BUS funding is only available to MCS approved installations and many installers are not MCS accredited due to the upfront costs and considerable admin required. This is where RES can help. As a Renewables distributor, we offer a comprehensive range of MCS certified products with full technical back up. We design systems to MCS standards and undertake the final commissioning and project sign off on behalf of the installer. We can facilitate free training through Daikin regional training centres.

Using AutoCAD work stations and the very latest software, our highly experienced design team can provide heat loss calculations, detailed installation drawings for both heat pumps, underfloor heating and solar PV systems. When it comes to fitting, every project has detailed drawings along with full schematics, both electrical and mechanical. With all work completed to MCS and BPEC standards you can be confident you will be getting the most efficient system for your project.



WHY UNDERFLOOR HEATING?

There are many benefits to a modern UFH system. These systems are ideal for low temperature applications such as our ASHP & GSHP offerings.



Due to the large thermal mass/area much lower temperatures can be applied whilst achieving high comfort levels in the home. It also works extremely well with more traditional oil and gas installations. The heat emitted from the floor provides a greater even spread of temperature and eliminates cold areas or the "draft" effect radiators can often give. Bathrooms and tiled areas feel distinctly more luxurious as floor temperatures feel comfortable underfoot giving a sense of greater satisfaction.

UFH also has the added benefit of eliminating the need for wall space taken up by radiators, providing more useful wall space and flexibility in home furnishing. Once experienced our UFH customers/homeowners agree that the initial effort and costs associated with the installation was well worth the initial investment.

SELF BUILDERS

Whether you're starting from scratch or renovating, we can offer a bespoke solution from our wide range of floor construction options to fit your particular project. Our experienced design team can work with existing structures or liaise with your architect to ensure the most efficient solutions for your build. Underfloor heating offers so much more than just a comfortable living environment. Freedom from bulky radiators affords an interior design flexibility which means you can make the most of your living space.



Architects & Developers

We undertake all types of projects residential or commercial and have the technical knowledge and experience to work alongside specifiers. Our professional team comprises of experienced technicians, system designers, sales and marketing personnel who have many years experience, and understand how to specify and implement complete renewable solutions.

Installers

All RES systems are designed using BS EN 12831 standard heat loss calculations and in strict accordance with the Microgeneration Certification Scheme quality guidelines. This ensures the system performs as designed and that the energy efficiencies of the primary generator are safeguarded. RES systems are also very easy to commission and to put into operation. As well as providing all the information needed by the installer, all manifolds include flow meters, temperature gauges (on both flow and return) & automatic air vents. Installation instructions are provided on A3 sized laminated sheets. These contain all the information the installer requires to ensure the system performs as designed.

Res UFH systems comprise of:

- PE-RT or Alpert MLCP Underfloor heating pipe and suitable floor fixing system.
- Manifold with High temp pump and blending valve and actuators
- Room Thermostats and wiring centre
- Design & Commissioning Drawings & Documentation

THE RES SOLUTION

The RES underfloor heating solution provides a fully warranted product, which is designed specifically for each and every project. Whatever the application, we can supply a range of underfloor heating pipe fixing systems designed to work with any type of floor construction. As part of our bespoke service our design team calculates which system will work best with your project, from the various systems listed over the next few pages.



CALL OUR
EXPERT ENGINEERS
TODAY ON **01935 421 198**
OR ALTERNATIVELY
EMAIL US ON
SALES@RES-DISTRIBUTION.COM



PIPE OPTIONS

ResiSTAPLE

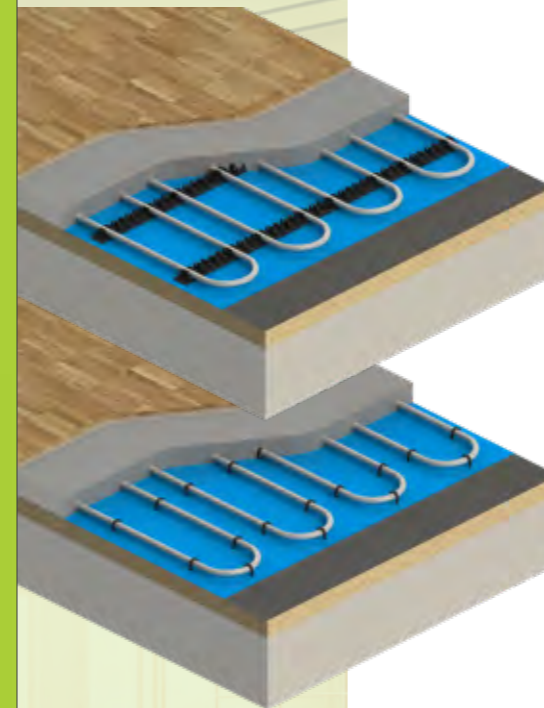
STANDARD SCREED SOLUTION

The most common and most energy efficient system laid in new build properties. The heating pipe is clipped via staples or using a clip rail system to the insulation board to hold the pipe in place whilst the screed is either poured or laid on top.

Suitability: New build, Extensions, Over solid concrete slab, Block & Beam

Specifications:

- Very high heat output
- Proven most cost-effective solution for new builds
- Underfloor heating sealed during building's construction
- Very simple to install



ResiFITPLATE400/600

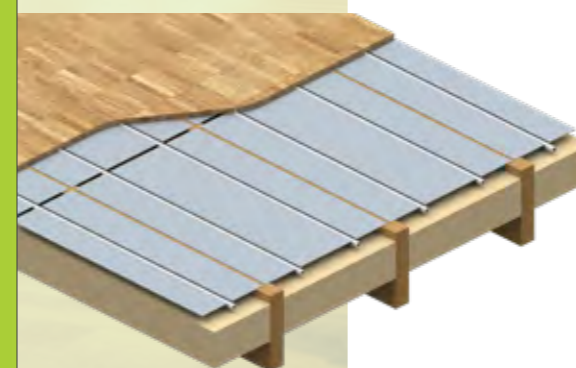
STANDARD "OVER JOIST" ALUMINIUM SPREADER PLATE

Aluminium Spreader Plates (Double Groove) ensure even and speedy distribution of heat from underfloor heating pipes and the correct positioning of the pipes during installation.

Suitability: New builds, Extensions, Retrofits

Specifications:

- Aluminium spreader plates (double groove) ensure even & speedy distribution of heat from under-floor heating pipes to fit into situations where floor has already been laid
- Reverse aluminium spreader plates fit underneath floor boards and between joists
- Aluminium Spreader Plates are designed to fit between numerous joist sizing's.
- Pipework easily clips into preformed grooves
- Underfloor heating pipe is fixed in the grooves of the plates. Insulation is placed in the void below the plates to minimize downward heat loss and dissipate the heat evenly across the floor
- Insulation is then installed up against the plates



PIPE OPTIONS

ResiREVERSE

REVERSE "FIT FROM BELOW" ALUMINIUM SPREADER PLATES

Aluminium Spreader Plates (Double Groove) ensures an even and speedy distribution of heat from underfloor heating pipes and the correct positioning of pipes during installation.

Suitability: New builds (timber frame), Below joists, Retrofits

Specifications:

- Reverse aluminium spreader plates fit underneath floor boards and between joists
- Aluminium spreader plates are designed to fit between numerous joist sizing's
- Pipework easily clips into preformed grooves
- Underfloor heating pipe is fixed in the grooves of the plates, insulation is placed in the void below the plates to minimize downward heat loss and dissipate the heat even across the floor



ResiTHERM20/50

STANDARD GROOVED FOIL BACK FOAM-BOARD

Pre-grooved insulation panels comprise a rigid thermal insulation material with grooves suitable for standard 16mm underfloor heating pipe.

Suitability: Existing properties, Over timber joist for first floors, Extension refurbishments

Specifications:

- Aluminium foil covers the surface of the foam board to minimize heat loss through the floor
- Perfect for a variety of installation types
- Fast, quick and easy to install
- Great for levelling mismatched floor heights
- Range of thickness's from 15mm to 50mm



PIPE OPTIONS

ResiSLIM

LOW PROFILE GROOVED FOIL BACK FOAM-BOARD

Pre-grooved insulation panels comprise a rigid thermal insulation material with grooves suitable for standard 12mm pipe.

Suitability: Existing properties, Over timber joist for first floors, Extension refurbishments

Specifications:

- Pre-grooved insulation panels comprise a rigid thermal insulation material with grooves and pattern positioned in the upper surface
- Aluminium foil covers the surface of the foam board to minimize heat loss through the floor
- Perfect for retrofitting properties with limited ceiling heights
- Great for levelling mismatched floor heights
- Cost-effective
- Thickness's 15mm



ResiLOWTEX15

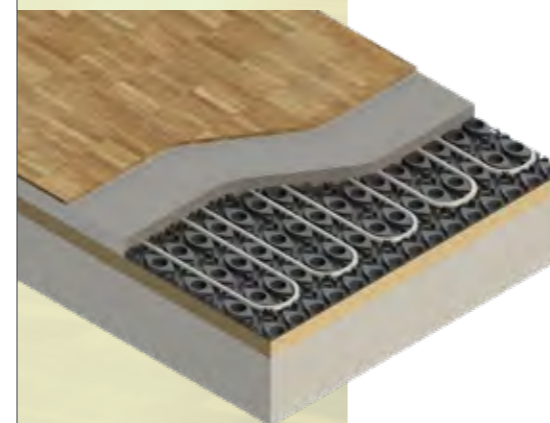
PROFIX PANEL

The high structural integrity of the Profix Panel enables the direct application of a highly thermally conductive screed which, in addition to a fast reaction time allows either a tiled, vinyl or thin laminate floor to be bonded directly to it or for a low tog carpet and underlay to be laid directly onto it.

Suitability: Retrofits, New builds, Extensions, Renovations, Over existing flooring, any floor covering

Specifications:

- Extremely low 15mm overall thickness
- Snap clips help to fasten the panels together and multiple break points with V shaped notches aid installation
- Benefits from a unique slide and lock system to connect the panels together
- Ultra-low profile for either a 10mm or a 12mm pipe



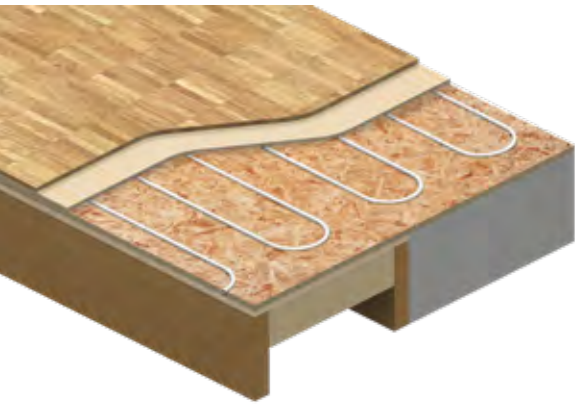
PIPE OPTIONS

ResiCHIP22

GROOVED CHIPBOARD FLOOR

Pre-grooved foil face 22mm board with grooves of a specified diameter and pattern position in the upper surface. Foil face heat diffusion layer covering all of the board including the grooves and then the continuous pipework pressed into place.

Suitability: Existing Properties, Over timber joist for first floors, Extension refurbishments



MANIFOLD SYSTEMS

Low temperature heat pump systems normally have a circulating pump integral to the system suitable for supporting the underfloor heating system without the need for additional pumps. High temperature systems require a pump and blending valve.



PIPE OPTIONS

ALPERT MLCP BARRIER

Multi-layer pipe for heating systems only - made from a 5-layer composite material using PE-RT as the inner and outer layers coupled with a 0.2mm thick aluminium core. This multi-layer pipe can run straight from a distribution manifold to an outlet point in one continuous length, without joints and reducing the chance of leaks. As multi-layer pipe has no memory, it doesn't spring or resist when laying so it's ideal for the one-person installation.

Key Benefits:

- Oxygen diffusion tight
- Corrosion resistant
- Lightweight
- High form stability after bending
- Excellent long-run life expectancy
- Easy, fast and safe installation



PE-RT BARRIER PIPE

The RES 3-layer PE-RT is very flexible, even more so than traditional PE-X pipes. The pipe is a 16mm x 1.8mm 3 layer barrier pipe constructed of a polyethylenraised temperature inner and an EVOH outer layer. PE-RT is a flexible low-cost solution for underfloor heating and as such is the most popular pipe we supply.

Key Benefits:

- Oxygen diffusion tight
- Corrosion & abrasion resistant
- Lightweight
- Flexible
- Chemically resistant





THERMOSTATS & CONTROLS

Control of heating systems are key to ensuring maximum comfort and system efficiency. RES supply digital, wireless touchscreen or Wi-Fi Smart controls.



TIO STAT PROGRAMMABLE

Available in Black and White the TioStat is Tio's most popular thermostat. Its sleek design, easy use and affordable price, make its the perfect choice for any home.

KEY FEATURES

- 7 day (5+1+1) Programmable setting
- Manual and Programmable modes
- Available in 230/24v
- Holiday Mode
- Child Safety Lock
- Easy Install



TIO SMART (WIFI)

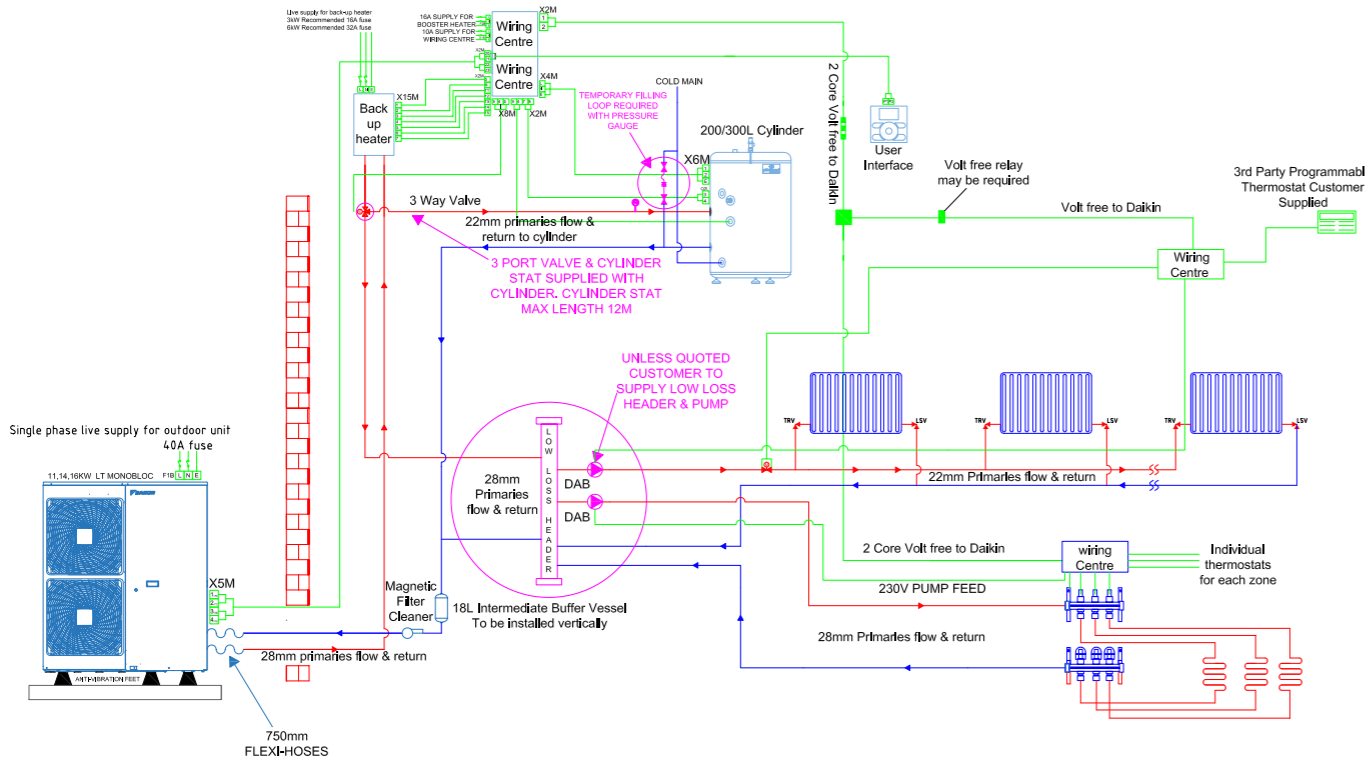
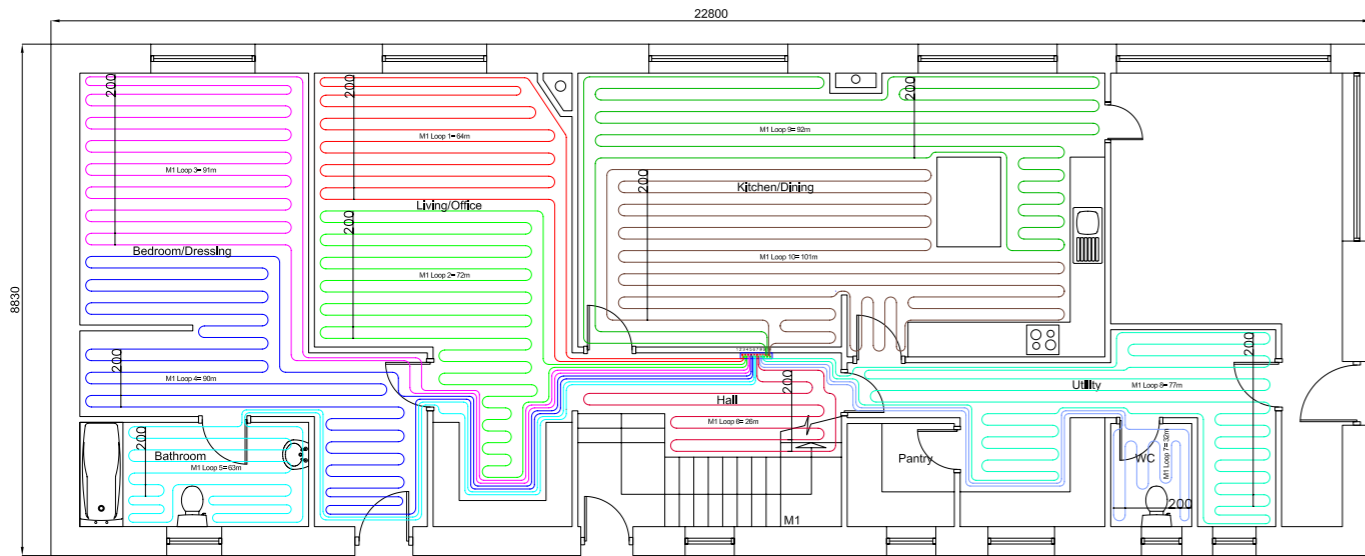
Available in Black and White the TioSmart is Tio's premium thermostat. The TioSmart has the same design and features as the TioStat. The TioSmart is Wi-Fi enabled and links with Tio Smart home System. Compatible with TUYA & Smart Life Apps





OUR DESIGN CAPABILITIES

EXAMPLES OF OUR QUALITY DESIGN SCHEMATICS



COMFORTABLE HOMES THE SMART WAY



UPGRADE to a TioSmart control system

Available in Black and White, the TioSmart has the same design and features as the TioStat but is Wi-Fi enabled and links with Tio Smart home System.

The TioSmart can be controlled via an App and is compatible with both Smart Life and Tuya. Works with Amazon Alexa, Google Assistant and SmartThings.





AIR SOURCE HEAT PUMPS

Daikin are the largest manufacturer of heat pumps in the world.

Daikin - The future of heating is here

A high efficiency Daikin Altherma air-to-water heat pump (ASHP) uses heat from the outside air to warm a home's central heating and hot water systems. Even in the harshest UK conditions, a Daikin Altherma air-to-water heat pump can extract heat from the air using it as a highly effective form of renewable energy. For every kilowatt of electricity the heat pump uses, it generates about 3-4 kilowatts of renewable heat from the air. Over the course of a year, it's up to 300% efficient (even the most efficient fossil fuel boiler is less than 100% efficient.) Best of all, running costs could be even lower when you choose Daikin, particularly if a home is heated by oil, LPG or electricity. The future of heating is here.

The Daikin Altherma Range from RES

These highly reliable domestic heating and hot water solutions are suitable for both new build properties and retrofit projects. Fully compliant with ErP and other environmental directives, Daikin's high seasonal efficiency heat pumps are designed to lower energy bills and reduce our Carbon Legacy. Daikin offer a 3-year parts and labour warranty with an option to extend the warranty for the life of the appliance.

"Daikin manufacture every component in house from refrigerant to PCB's and can therefore guarantee reliability. Their compressors are designed to run at only 80% of capacity to maximize efficiency and longevity."

Shane Oxberry Managing Director RES Distribution





THE DAIKIN ALTHERMA RANGE



LOW TEMPERATURE MONOBLOC SYSTEM

The most compact ever all-in-one heat pump, yet it's also extraordinarily efficient and reliable all year round. A natural fit for homes where space is limited, the new Daikin Altherma LT Monobloc has only a wiring centre indoors, while the compact and quiet outdoor unit can be installed almost anywhere - under a windowsill or in the smallest of gardens. Perfect for an energy-efficient new property. It's also suitable for replacing an older heating system.

3 key advantages:

- Co-efficient of Performance of up to 5*
- Space-saving design
- Reliable operation even when -25C outside

* 5kW Daikin Altherma LT Monobloc tested in accordance to EN 14511 at A7 W35



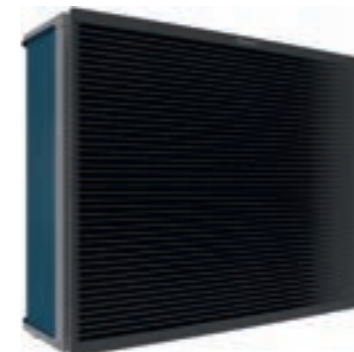
LOW TEMPERATURE SPLIT SYSTEM

Daikin Altherma Low Temperature (LT) Split is the most versatile and efficient air-to-water heat pump for new properties and low energy homes. Offering the ultimate in comfort and control for heating and hot water, it includes a space saving, wall hung indoor unit and optional hot water cylinder, while the compact and quiet outdoor unit can be installed almost anywhere - up to 50 metres from the property. Perfect for an energy-efficient new home, it's also suitable for replacing an older heating system.

3 key advantages:

- High efficiency (COP up to 5.04%*) with typical annual efficiencies of up to 300%
- Ideal for new properties and low energy homes
- Reliable operation even when -25C outside

* 4kW Daikin Altherma LT Split tested in accordance to EN 14511 at A7 W35 (COP 5.04)



HIGH TEMPERATURE SPLIT SYSTEM

Daikin Altherma High Temperature (HT) air-to-water heat pump is the ideal solution of a refurbishment and renovation projects. Made up of a compact indoor unit, and sleek, compact outdoor unit, the Daikin Altherma high temperature heat pump delivers water temperatures of up to 70oC, so it's fully compatible with older radiators that require a higher temperature flow. That means there's no need to replace your existing radiators, making it the perfect upgrade to your home. Best of all, it offers year-round efficiency – even in the coldest temperatures.

key advantages:

- Ideal for refurbishments & retrofit projects
- Works with existing radiators
- Simple replacement for oil boiler



HYBRID SYSTEM

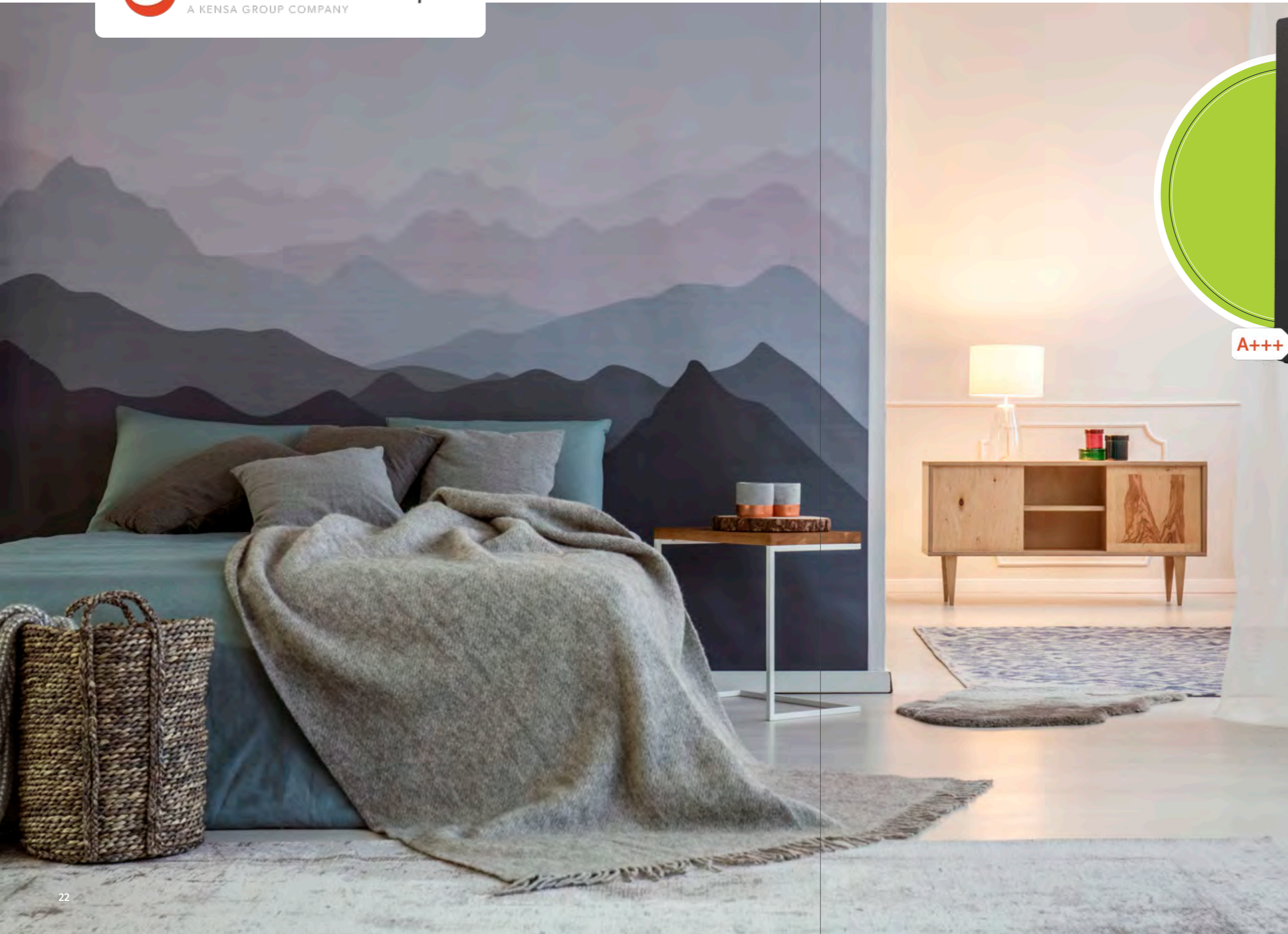
The Hybrid heating system combines renewable heat pump technology with a traditional gas boiler. The hybrid gas boiler automatically selects the most efficient mode, choosing between heat pump, boiler and hybrid modes to give the most economical or ecological operation, depending on preference. The Daikin Altherma Hybrid system is the most advanced way to replace a gas or LPG boiler, combining a familiar gas boiler with the added efficiency of a renewable energy heat pump, giving you the best of both worlds.

3 key advantages:

- Two-in-one heating systems for total peace of mind
- Automatically selects the most energy efficient operation
- Works with all types of radiators*

*For the highest savings, always choose low temperature radiators





GROUND SOURCE HEAT PUMPS

Award winning Heat Pumps

Kensa pioneered the adoption of heat pump technology in the UK. Combining quality components, precision engineering, talented production staff and a state-of-the-art test facility, Kensa's heat pumps provide market-leading performance. Beyond manufacturing heat pumps, we work with many installers, specifiers and housing providers to deliver exceptionally well-designed systems which out-perform the market.

SOLAR PV & BATTERY STORAGE

As well as designing a bespoke solar solution for your home or business, RES will provide you with information regarding the financial benefits of the solar PV system, with predicted electricity generation and estimated payback period.



SOLAR PV

Working in partnership with industry leading manufacturers

Throughout the UK thousands of homeowners and businesses are currently benefiting from free electricity using Photovoltaic (PV) solar panels. By generating electricity from solar panels this now means we can produce electricity to use in our homes and businesses, with the additional peace of mind that we are reducing our carbon footprint.

BATTERY STORAGE

Battery storage is a completely independent unit. The battery stores the excess electricity generated by your Solar PV Panels. The stored electricity is then used throughout your home or business when the electricity demand is greater than your solar generation. The system will help you to reduce electricity costs and there is guaranteed performance for at least 10 years.



wallbox

Electric Vehicle Installation

RES work in partnership with a nationwide EV charge point installation specialist. Meaning we are able to offer competitively priced supply and installation packages.

EV CHARGING

Dedicated to changing the way the world uses energy. Wallbox creates advanced electric vehicle charging and energy management systems that redefine users' relationship to the grid.

They know that great innovation doesn't come from taking the easy route. That's why they're pushing the boundaries of what EV charging can do! And as long as there are walls to inspire them, they'll keep designing out-of-the-box boxes to overcome them.

