calorex INSIGHT 30 YEARS

The newsletter for Calorex heat pumps and dehumidifiers

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Cornish Homes Make Air Source Switch

Cornish Housing Association installs air source heat pumps in Decent Homes project

Carrick Housing, based in Truro, Cornwall is installing the newly launched Calorex domestic air source heat pumps at its Westview apartment complex in Perranporth.

Responsible for more than 3,700 homes in the area, Carrick has already purchased more than 200 Calorex ground source heat pumps and installed them across the region with extraordinary results.

Calorex ground source heat pumps serving Carrick properties are currently generating around 1MW of heat and are served by around 10 miles of boreholes. Containing 20 miles of brine and water ground-loop heat collector pipework, all boreholes have been drilled by Cornish drillers creating valuable work for local skilled trades.

Huge Carbon Savings

Driven by the Decent Homes programme, with particular emphasis on improving energy efficiency and reducing carbon emissions, Carrick has replaced solid fuel, charnwood, electricity and oil heating systems with Calorex domestic heat pumps. Carbon emissions from these projects alone have been reduced from 1,000,000 kgs annually to around 200,000 kgs per annum.

This huge annual carbon saving of 800,000 kgs per year continues to be improved and has been achieved using Calorex dual temperature domestic heat pumps which deliver all dwelling heating and hot water. End-user fuel bills have also been reduced considerably which is a major influence in technology selection as the government strives to eliminate fuel poverty in the UK.

With almost a third of Carrick properties situated off the gas network and a commitment to reduce tenant fuel costs while improving energy efficiency across the whole of their housing stock, Carrick embarked on a technical appraisal of all alternative technologies.

The new project in Perranporth will see Calorex air source heat pumps retro fitted into existing apartments replacing electric storage heater systems. The super quiet heat pumps will supply all of the space heating and domestic hot water requirements in the dwellings and will be the first monovalent air source heat pumps installed in the area that can achieve these remarkable temperatures without back up electricity heating.

Air Source For Next Project

Simon Waters of Carrick Housing comments: “We have considered air source heating systems previously but were concerned with noise levels, dhw provisions and running costs associated with products from other manufacturers.

“The new Calorex units eradicate these issues completely and we are looking forward to getting this installation completed before the winter heating season starts in order to minimise tenant disruption.”

CUSTOMER COMMENTS

“On behalf of everyone, I thank Calorex for saving the planet.”

Ben Sherbourg, FMP Consultants

Beacon Status

Carrick Housing Limited have achieved Beacon status for improving housing services involving tenants and have earned three stars (3*) in two audit commission inspections. Earlier projects with Calorex also earned the top prize in the South West Energy Awards 2006 for Best Housing Installation for retro fitting heat pumps and Carrick are on target to complete their decent homes programme two years ahead of schedule.

For more on the air source heat pump product range turn to page two.

Congratulations

Copeland Compressors has named Calorex Heat Pumps as the company’s manufacturer of the year. The award is presented for outstanding performance across a broad business spectrum.

Robert Kebby, sales director of Copeland Compressors, recently visited the Calorex headquarters in Maldon, Essex, to present managing director, Richard Carrington with the prestigious trophy.

Calorex managing director, Richard Carrington, left, pictured with Robert Kebby of Copeland Compressors.

Teak Decking Is Ship Shape

Treated with the help of Calorex dehumidifiers, teak wood decking weathers well and gives a smart and sweeping finish to decks of any size.

Teak used for decking by the UK’s four leading boat builders is guaranteed built to last – thanks to the prestigious treatment it receives in drying rooms controlled by Calorex dehumidifiers.

D.A.Watts and Sons of Thrapston, Northants, uses four DH150 BXF dehumidifiers in its two drying rooms, seven days a week, 365 days a year, to produce Wattsons Teak Decking in order to achieve the optimum moisture content.

The company initially invested in two Calorex dehumidifiers four years ago and recently invested in an additional two new units.

Air Source Set To Follow Ground Source Success

Designed specifically to operate in the UK's difficult winter climate, delivering domestic hot water temperatures up to 65°C and independently tested to EN 14511 by BSRIA, the new range of domestic air to water heat pumps from Calorex provide the ideal monovalent heating solution for domestic heating systems and hot water production.

Unique to the market, the units have the ability to deliver up to 65°C of domestic hot water without any direct electrical resistance backup and operate from a single phase electrical supply with very low starting currents.

Dual temperature operation ensures maximum energy efficiency and allows integration with both under floor heating and traditional radiator systems with variable temperatures from 30°C to 55°C when space heating.

The new range of domestic air to water heat pumps provide the ideal single-source solution for domestic heating and hot water production.

Leader in the market with more than a quarter of a million units in operation all over the world, these Calorex domestic air source heat pumps can operate from air temperatures as low as minus 15°C.

Available in 4.5kW, 9kW and 12kW variants, performance features dictate that in normal UK humidity and winter conditions the units will not require any defrost cycle until ambient air temperature falls to 4°C. When a defrost cycle is needed the unit will completely defrost in 4 minutes and this feature alone ensures industry best seasonal performance 'COP's and lower operating costs for the end user.

Scroll compressor technology is standard across the range with twin compressors in the larger 9kW and 12kW variants. All models feature copper condensers, well known for their heat transfer abilities.

Operational life of the units is increased and maintenance reduced with the use of epoxy evaporator coils and the use R134a gas which further improves compressor reliability due to low operating pressures.

These super quiet heat pumps have all components housed within an anti-corrosion Plastisol cabinet and are protected by three layers of insulation controlling noise transfer.

With more domestic heat pump installations in the UK than any other manufacturer Calorex Sales Director Tony Barnes comments: "For an air source heat pump to deliver 100% of space heating and domestic hot water requirements efficiently in the UK's humid winter climate, defrost cycling needs to be managed and controlled in order to ensure system efficiency."

Tony added: "These new Calorex air source heat pumps have been designed specifically to operate in these conditions and will deliver total thermal comfort to home owners, reduce carbon emissions and lower fuel bills for end users.

"A number of local authorities and housing associations have already specified these air source heat pumps as they look to reduce CO_2 emissions and eradicate fuel poverty in line with government targets."

CUSTOMER COMMENTS

"Anyone running a leisure centre should opt for a Calorex unit as part of their standard specification."

Alec Fraser, Technical Manager, Pontypool Leisure Centre

Calorex Keeps Quiet About 31 Range

The latest in an impressive stable of environmental control products, the brand new Calorex '31' range of heat pumps offer low operating costs, and 74% less emissions than oil boilers.

Whisper-quiet even when at full capacity, the '31' range is suitable for installation both indoors and outdoors. For hard to access areas, slimmer 'tower style' profile in a smart two tone grey livery and high quality corrosion-resistant materials, serves as an added bonus.

All four models come with a full flow titanium condenser guaranteed for five years. Other features include a water flow switch and environmentally friendly R407C refrigerant gas and a unique air flow design for maximum effect and greater efficiency.

All '31' range models have digital controls with independently coloured fault indicators. Robust and strong, all units offer a high-efficiency scroll compressor within an insulated sealed housing with proven non-corrosive construction.

The '31' range does not require large electrical supplies and work independently of flues or fuel storage tanks. In fact, fully automatic, you just set the thermostat and let the heat pump do the rest.

Ground Source Breaks Half Million

Calorex is celebrating breaking through the half million operating hours mark of measured ground source heat pump performance data by extending its award-winning range of units.

The Essex-based market leader, with a 30 year heat pump pedigree, has more UK-based installations than any other manufacturer and has added 8.0kW and 12kW models to its existing 3.5kW and 5kW units.

GSHPs take low-level heat that occurs naturally underground and convert it to high-grade useable heat for the home. For every unit of electricity used, Calorex GSHPs will generate three to four units of heat. Based on current fuel prices, GSHPs are a cheaper form of space heating than oil, LPG and electric storage heaters and offer zero carbon emissions.

The only products on the market that have been designed specifically for use in UK housing and climatic conditions, Calorex GSHPs produce thermal power outputs up to 12kW and can generate domestic hot water at up to 65°C without any supplementary electric resistance heating. Operating in conjunction with a standard central heating programmer, GSHPs can heat DHW, radiators and under-floor systems simultaneously through external mixing valves.

"Calorex offers best in class performance to its customers based on continuous investment in research and development with the back-up of a national network of skilled service engineers," says sales director, Tony Barnes.

"With more than 600 installations in the UK, Calorex has already notched up more than 600,000 hours of performance data from monitored UK installations with more projects coming online."

The compact Calorex GSHP units are finished in a white, coated steel cabinet and can be used with both vertical and horizontal ground loop installations. Operating from single phase power supplies they offer:

- Whisper quiet operation
- Very low starting currents
- Simple installation
- Uncomplicated controls
- Dual temperature operation for maximum efficiency
- Industry best seasonal performance factors

Of all available micro-renewable energy technologies available for use in homes, ground source heat pumps currently have arguably the most to offer both affordable heating and low CO2 emissions. Calorex ground-source heat pumps are compliant with Decent Homes 'thermal comfort' requirements and offer 100% availability of heat and domestic hot water 24 hours a day, regardless of weather conditions.

Smiles All Round For Carbon Trust Loan

A major dental products manufacturer is all smiles after installing a heat pump from Calorex.

Wiltshire-based Kemdent® produces a globally recognised range of dental laboratory and surgery products at its specialist factory in Swindon.

Kemdent® funded the purchase of the unit, a Calorex AW1534BH through an energy-efficiency loan provided by The Carbon Trust. The loans are part of a £10m government-backed initiative providing funding of between £5,000 and £100,000 to qualifying small and medium sized enterprises in England and Wales.

Part of the manufacturing process in the Kemdent® factory involves the melting of wax which results in a large amount of heat being expelled into the air. The Calorex unit works by capturing this previously wasted hot air, recycling it to produce a free supply of hot water for the factory.

A major denture producer won an energy-efficiency loan for improvements at its Wiltshire factory.

To utilise the large amount of 'free' heat produced, Kemdent® has combined the Calorex unit with a new gas boiler, linked via a heat exchanger to provide heating for the whole factory. This has replaced an array of immersion heaters, electric fans and under floor heating previously required.

Unlike other water heating systems, a Calorex heat pump is capable of delivering up to five times more energy than it consumes. This makes them environmentally friendly and inexpensive to operate and the ideal product to qualify for a Carbon Trust interest-free loan.

Meeting The Team

Phil Park, 36, *(above)* joined Calorex in February this year as operations and manufacturing director, bringing 12 years of experience in manufacturing of heating supply products across five European sites.

Married with two children, Phil is looking forward to overseeing the updating and improving of operations at Calorex in readiness for the continuing growth of the business.

Glenn Harrison *(below)* joined Calorex this summer as national specifications manager. Glenn's role is to promote the use of heat pumps to housing associations, private builders and local authorities.

Glenn, who is married with an eight-month-old daughter comments: "Everyone wants heat pump technology for its unmatched green credentials and for its impact in tackling fuel poverty issues with its low running costs and low carbon emissions."

Still only 33, Glenn has already chalked up several landmark career highlights including securing multi-million pound contracts for the supply of more than a million radiators for social housing.

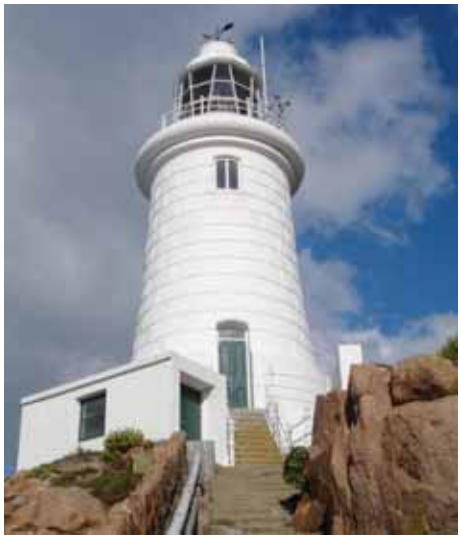
CUSTOMER COMMENTS

"Sorry to have to contact you about my heat pump, but it is the first replacement part I have needed since it was fitted in 1985!"

Calorex Customer, Braintree, Essex

Calorex Glows For Lighthouse

The stunning La Corbiere lighthouse has been keeping ships away from the rocks off the Jersey coastline since 1874 and owes much of its pristine condition to the work of four Calorex dehumidifiers.



Alarmed by peeling paintwork caused by dampness inside the imposing stone building – Jersey's Harbour Authority launched a rapid £47,000 refurbishment programme.

A Calorex dehumidifier has been installed on each of the three floors of the lighthouse and a fourth in the room where the compressed air foghorn is stored, to help preserve its condition.

Four additional dehumidifiers are also making life more pleasant for passengers using the underground walkway at Jersey's Elizabeth Harbour ferry terminal.

Calorex dehumidification units are self-contained in an attractive wall-mounted cabinet with fully automatic operation. Either unit can be supplied as a through the wall (TTW) version to allow installation in an adjacent space.

Pontypool Takes Plunge

A Calorex combined heat recovery and dehumidification unit (HRD) is maintaining perfect environmental conditions and at the same time, slashing both energy costs and CO_2 emissions at the recently refurbished Pontypool Active Living Centre in Pontypool Park, Wales *(pictured)*.

Typically, for every unit of energy that a Calorex HRD consumes, it will convert three times this amount to useable heat. The potential energy savings are huge. In fact, compared to traditional heat and ventilation energy, cost savings of over 60% are not unheard of. Corresponding CO_2 emissions can be dramatically reduced by up to 70%.

Formerly known as the Pontypool Leisure Centre, the £6.85m refurbishment includes improvements and additions to the existing wet leisure facilities.

The centre has a 25m pool with a viewing gallery for up to 200 spectators, a separate teaching pool, a popular hydro slide system and a brand new health suite with spa, steam room and sauna. A Calorex HRD30 is fitted to the main pool area, with a separate TTW55 unit commissioned for the spa area.

With the installation of new units, estimated figures showed a 42% saving on running costs and a 51% reduction in CO_2 emissions (288 tonnes/annum) compared with the previous AHU.

The running cost analysis data, coupled with the reduction in CO_2 emissions, made the Calorex units an obvious choice for the centre.

The Calorex HRD for Pontypool was specially modified to incorporate a Cylon BMS controller to enable easy integration into the building management system and remote monitoring and diagnosis should any problems arise.

Havoc For Historic Cars

Creating the ideal atmosphere was top priority when a long-term vintage car collector decided to move his collection out of professional storage and into a converted barn at home.

An unmanaged environment would wreak havoc on historic cars that would suffer irreparable corrosion and deterioration unless stored in humidity-controlled conditions. At 55%RH (relative humidity) corrosion of steel is virtually eliminated and near perfect conditions are created for the storage of the components such as wood and leather on not just old vehicles but also new.

Two Calorex dehumidifiers were specified to protect the enviable private collection of historic cars, housed in a large 18th Century tithe barn.

Typically, for every unit of energy that a Calorex dehumidifier consumes, it will convert 2.5 times this amount to useable heat. The potential energy savings are huge. In fact, compared to traditional heat and ventilation energy, cost savings of 500% are not unusual.

National Treasures Protected

Dehumidifiers from Calorex are playing a vital role in the protection of national treasures housed at the Courtauld Institute of Art at Somerset House, in central London.

Standing on the banks of the River Thames, the 18th century palace houses the Courtauld's world-famous collection of Old Master, Impressionist and Post-Impressionist paintings, sculptures and applied arts, alongside a renowned collection of prints and drawings including works by Cézanne, Michelangelo, Rembrandt and Turner.

Chelmsford-based Adcock Refrigeration & Air Conditioning specified the installation of Calorex DehuTech desiccant dehumidifiers to control humidity in four, 8ft x 12ft brick-lined, underground vaults, located in the Witt Library at the Courtauld Institute of Art.

Long term storage of film media requires the creation of a low humidity, low temperature environment, usually around 10°C and less than 40% relative humidity and Calorex DehuTech desiccant dehumidifiers are capable of achieving these required low levels.

CUSTOMER COMMENTS

"I want to thank Calorex for its excellent after-sales service."

Mr M Western, via Email