

# Oceanair and Calor Gas join forces

*Oceanair Distribution, the leading UK air conditioning distributor, has teamed up with Calor Gas to roll-out the world's first LPG-powered heat pump VRF air conditioning.*

At newly opened office, distribution and training centre in Bristol, Oceanair Distribution announced the launch of a world first LPG air conditioning heat pump, formed in a close and exclusive collaboration between Oceanair and Calor Gas. The ground-breaking technology operates on the same principles as LPG-powered cars and commercial vehicles.

The system also provides "free" hot water and generates its own electricity - which can be used in the building for lighting and general domestic services.

Bob Cowlard, managing director of Oceanair Distribution, said: "It's a hugely exciting development. Many buildings requiring air conditioning are maxed out on electrical power, and don't have adequate mains gas supply. The new LPG-powered Sanyo system opens up a big and important new market."

## A CASE FOR GAS

Limited power situations can arise in country hotels, club-houses on golf courses, leisure centres in rural settings, military bases and temporary facilities catering for sporting events or corporate entertainment.

However, a surprising proportion of inner-city areas also suffer from lack of three-phase power and inadequacies in mains gas supply. Some 40% of commercial buildings are believed to suffer electrical supply problems. Therefore, standard air conditioning applications, such as offices, shops and restaurants, are legitimate applications for an LPG-powered solution.

The option of upgrading the power supply to three-phase is expensive and disruptive - and is often not an attractive option for building owners.

The new approach uses commercial grade liquid propane gas (LPG), as used for heating, as a fuel to power a Sanyo gas-driven VRF air conditioning system.

At the heart of the system is a two-litre Nissan engine, operating at between 800-2100 rpm. It is equipped with conventional engine components, such as spark plugs, oil and air filter, as on a standard car.

Importantly, the system only requires connection to a single-phase power supply to power start-up, control circuit, and inverter-driven fans.

The technology is highly efficient, ranging from between 1.4 (140%) to 1.6 (160%), when used as a heating or cooling system respectively.

In terms of costs, the technology is promoted as an excellent replacement for oil-fired heating systems,



*LPG powered Sanyo heat pump installed in Haringey Adult Education Centre*

against which it offers an immediate cost saving.

If mains gas is not available, it will nearly always be significantly cheaper to install a bulk Calor Gas tank than to extend the gas main.

In a like-for-like design, due to the higher calorific value of Calor Gas compared with mains natural gas (it contains 2.5 times more energy), the LPG-powered system offers a small running cost saving over an electrically-powered system. However, when applied for an ideal application, then the cost saving is considerable - around 40%.

Due to the compelling energy efficiency of the system, which delivers both "free" hot water and up to 4kW of self-generated electricity, government Enhanced Capital Allowances are available - covering both equipment and the cost of installation.

## ALREADY IN OPERATION

From Calor's point of view, LPG-powered air conditioning will help to balance seasonal demand for LPG.

A number of LPG-based air conditioning projects are already successfully up and running in the UK. An installation at Haringey Adult Education Centre has been running for three years. Another installation is the Castle Leslie Estate in Northern Ireland, where the GHP has been installed as part of the castle's ongoing restoration project.

The technology is now being rolled out across the UK in a partnership between Calor Gas and Oceanair Distribution Ltd. Calor's network of field engineers will be helping existing customers evaluate the opportunity to install the new air conditioning. Oceanair will then follow up with detailed site assessments and project quotations.

Bob Cowlard says: "LPG-powered air conditioning opens up a new frontier for the industry. Not only does it work, it delivers superbly in terms of efficiency and performance. It opens the door for a whole new generation of air conditioning installations around the country."