

CASE STUDY

Greener solutions for Solar Thermal and GSHP Griffiths AC



Background

Established in 1999, Griffiths Air Conditioning and Electrical Contractors provide a range of building engineering services to domestic, commercial and industrial clients. Their business focusses on the installation of air conditioning and heat pumps and also carries out work involving electrics, gas, plumbing, solar panels, ventilation and underfloor heating. Their service team also provides essential on-going aftercare to ensure installed equipment is operating as efficiently as possible.

Griffiths AC have shared some of their recent experiences using an environmentally friendly alternative to mono propylene glycol (MPG) and mono ethylene glycol (MEG); Greenway[®] Neo, for solar thermal and ground source heat pump projects.

Solar thermal solution at local school

Griffiths first used Greenway[®] Neo, a plant based heat transfer fluid from Climalife, on a solar thermal system which had lost its charge of mono propylene glycol (MPG) through a leak. The MPG alternative produced by the fermentation of natural (99.7%) purified glucose syrup, is a good choice in these types of applications due to its higher temperature tolerances, when compared to MPG. Griffiths have first-hand knowledge of MPG degradation and also use Climalife's SolRnett[®] cleaning product when preparing systems for refilling. With Greenway[®] Neo already in stock, Griffiths used it when they had a call to a Solar thermal system at a local school. Once again this was a system where the MPG had degraded so SolRnett[®] was used to clean the system prior to being re-charged.

Solution for ground source heat pumps

Griffiths prefer to use Greenway® Neo for ground source heat pumps too. One of the biggest factors in this decision is around concern over the suitability of mono ethylene glycol (MEG), especially near water courses, as it can be toxic for animals and fish. A concern shared by the GSHP Association.

Ground source heat pump: Orangery Project

Griffiths have just completed a local project where they installed a Daikin 8KW Altherma Monoblock air source heat pump system. Bill Groome, a local farm land owner, built a 40m² orangery adjoining his farmhouse where Greenway® Neo has been utilised throughout as the HTF. The heat pump is linked directly to a Polypipe 'In-Screed' system comprising of a 4 port manifold supplying 18mm underfloor heating pipe secured with castellated floor trays. The pipe was laid at 100mm spacing in a spiral pattern ensuring a comfortable even floor temperature and as low as possible HTF flow temperature whilst still satisfying the buildings heat loss demand. In this case weather compensated between 35°C and 45°C. By running an air source heat pump at the lowest temperature possible, in turn the maximum operating efficiency (SPF) was ensured.



Bill was keen to promote the usage of renewable energy and products, which fits in with the local focus, as Burton Latimer has one of the largest onshore Wind and Solar Farms in the country.

One of the latest R32 Daikin heat pump AC units was also installed for the orangery by Griffiths.

An easy choice



Griffiths AC have been using Greenway® Neo for a while now. It is used as their standard heat transfer fluid for all their installations, including Solar Thermal systems, Ground and Air source heat Pumps, Monoblock systems and also for underfloor heating.

'The choice to use Greenway® Neo was easy...', says Matt Young, Technical Manager at Griffiths, *'...we only need one product, and we chose the most environmentally acceptable product on the market, which fits our company policy to use renewable products wherever possible'*.



“Specifying Greenway® Neo for the majority of our applications makes perfect sense, as it is such a versatile product” said Ian Griffiths one of the Directors.

Demand for environmentally friendly alternatives, such as Greenway® Neo is increasing. Contact your local supplier for more information.

For information regarding this case study please contact:

Climalife – IDS Refrigeration Ltd

Mel Summers, Marketing Co-ordinator

Tel: +44 (0)117 980 2520. Email msummers@climalife.dehon.com

Registered Office: IDS Refrigeration Ltd
Green Court . Kings Weston Lane . Avonmouth . Bristol . BS11 8AZ
Tel: 01179 802520 . Fax: 01179 802521
climalife.uk@climalife.dehon.com
www.climalife.co.uk www.climalife.dehon.com

IDS Refrigeration Limited
Registered In England & Wales
Registration No. 3400691 . VAT No. GB 709 447 517