

## CASE STUDY

### *Opteon™ XP40 (R-449A) Case Study:*

### *R-404A condensing unit failure leads to the use of Opteon™ XP40 (R-449A).*



Grace Foods UK is one of the UK's most progressive food companies, supplying a market-leading range of speciality and world food brands to the retail, wholesale and foodservice sectors throughout the UK and Europe.

The company operates a 120,000 sq. ft. state of the art distribution facility in Welwyn Garden City comprising ambient, chilled and frozen storage facilities.

When a R-404A condensing unit on a freezer room failed due to age, they asked their contractor David Blakey Services Ltd for their recommendations as to a suitable replacement.

Grace Foods UK wanted to ensure longevity of the installation and had already been made aware that the current refrigerant R-404A, was not a viable long term option due to its high Global Warming Potential (GWP) and that the use of virgin R-404A for servicing would be banned by the F-Gas Regulation from 1st January 2020. Opteon™ XP40 (R-449A) has a GWP of 1397, nearly a third lower than that of R-404A at 3922 and is already approved by the leading compressor manufacturers.

The replacement 45 KW condensing unit was supplied by RC Scutt with a Frascold Reciprocating Compressor W60206Y, using a POE 32 viscosity grade oil. The system was required to evaporate at -26°C and had a 60kg charge of Opteon™ XP40.



Although the condensing unit was replaced, the rest of the equipment was in good working order and was not changed. The DBS engineer Lewis Powell, closely followed the retrofit guidelines for Opteon™ XP40 (R-449A) which had been supplied to him by Climalife UK. The superheat on the expansion valve was widened to allow for the slightly different properties of the Opteon™ XP40 refrigerant. Afterwards Lewis commented “This was a very simple retrofit with absolutely no loss of capacity or performance”.

The rest of the site will be converted away from R-404A when parts fail and/or the gas is lost or a replacement unit is needed as was the case with this system.

John Herbert the Service Manager of DBS commented “We were pleased with how easy it was to use Opteon™ XP40 instead of R-404A and we will be recommending its use to other customers.”

The system was installed in January 2016 and has been running with no reported issues to date.

**For further information please contact Mel Summers, Marketing Co-ordinator for Climalife in the UK.**

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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](http://www.climalife.co.uk)      [www.climalife.dehon.com](http://www.climalife.dehon.com)

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