

CASE STUDY

SUCCESS WITH ISCEON® MO79 (R422A) FOR TOBACCO PROCESSING PLANT



With the use of virgin HCFCs banned at the beginning of 2010 and very limited availability of reclaimed R403B. It was very obvious to Kettering-based refrigeration and air conditioning engineers, Greencold that their customer, a local tobacco processor, was right to be concerned about the future availability and price of this refrigerant even ahead of the final phase out date of 31st December 2014. Greencold looked to provide an easy solution and turned to Climalife UK for advice and guidance on the most suitable refrigerant to use as a replacement, with the minimum of disruption to their customer.

The customer's equipment consisted of 10 individual dx units cooling CO2 tanks, with a mixture of semi-hermetic and open drive reciprocating Bitzer compressors, each holding approximately 35kgs of R403B refrigerant.

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Following the consultation with Climalife, Greencold, chose ISCEON® MO79 (R422A) as a suitable replacement refrigerant and work commenced by converting one system at a time over a period of 6-8 months. The shaft seals were not changed as they were in good condition at the time, however in accordance with the conversion guidelines, the o-rings on the solenoid valves were changed and new filters driers fitted. An oil change was carried out following the completion of each individual conversion, but the same oil type, Suniso 3GS was kept. The expansion valves were closed slightly to get the best operating performance with ISCEON® MO79. After conversion



suction saturated temperature was kept at -29°C and a suction pressure of 0.9barg, whilst the condensing pressure was 13.5 barg and the condensing temperature was 30°C .

Since the completion of this project in 2010, in the intervening years, Greencold have carried out regular maintenance and leak testing, and no leaks have been reported which can be attributed to the new refrigerant used. The customer has been pleased to find that the system's running conditions and compressor amps have been very similar to when the original R403B refrigerant was in use.

For further information please contact: Laura Haim, Marketing Co-ordinator for Climalife in the UK.

Date of issue: 21st February 2013