



Press release

ATMOsphere Europe – preparing for widespread natural refrigerant use in light of F-Gas Regulation

Brussels, 23 March 2015: ATMOsphere Europe returned to Brussels on 16 & 17 March 2015 for its 6th, and largest edition, attended by 230 participants. The event featured 60 international speakers, who presented on the very latest natural refrigerant trends in and around Europe. With new technologies to improve the efficiency of CO₂ in warm ambient climates, and increased investment in training, the market is already well prepared for the restricted use of HFCs foreseen by the new EU F-Gas Regulation.

Conference Chairman and shecco Managing Director, Marc Chasserot, voiced his confidence in the continued market growth in his welcome message: “Here in Europe we really are at the forefront of natural refrigerant technologies, we are leading the world. We see that policy has been a big driver of this, setting the framework, but playing an equally important role are the customers who want these technologies. We are seeing now more and more solutions, even for warmer climates, and using a variety of natural refrigerants.”

EU F-Gas Regulations favours those that already work with natural refrigerants

In January 2015 the EU F-Gas Regulation entered into force, requiring a reduction in the average GWP of refrigerants from 2000 to 400 by 2030. As highlighted by representatives from the European Commission and individual Member States during the opening Policy Session, this sends a clear signal to the manufacturers and buyers of refrigeration and AC equipment to avoid the use of HFCs as much as possible.

Further strengthening the position of natural working fluids, the French Government plans to update regulations affecting ammonia installations, to allow for a wider introduction of NH₃ technology. The German Federal Environment Agency has published a hydrocarbon strategy identifying areas within the RAC sector where hydrocarbons could be used to a larger extent, such as household heat pumps.

The end of the “CO₂ equator” is in sight, but greater emphasis on training needed

Whilst in 2013 the need for cost-effective CO₂ transcritical refrigeration for warm climates was a hot topic of discussion, the technologies that could make this a reality were not yet tried and tested. Two years later, major retailers and system suppliers are busy installing economizers, ejectors, mechanical subcooling, adiabatic condensers and parallel compression, proving the efficiency of CO₂ transcritical in peak ambient temperatures. The message from ATMOsphere Europe 2015 was clear: one of the final

hurdles to the widespread adoption of CO₂ commercial refrigeration is about to disappear.

“This is no longer a northern European thing, with growth in central and east European countries and the gradual lowering of the CO₂ equator,” said Advansor’s Torben Hansen.

One issue that still remains is training, with many of the presenters at ATMOSphere Europe emphasising the vital role that training will play in the phase down of HFCs. Although progress is being made, with major system suppliers such as Carrier and Epta highlighting their training programmes, a survey by AREA (the European Association of Air Conditioning and Refrigeration) revealed that in 2012 on average only 8 -12% of contractors were trained with low GWP refrigerant systems.

“A key fact in ensuring the continued success of CO₂ systems is industry expertise. From design, installation, commissioning through to service, it is essential that the knowledge exists to deliver and maintain these systems in the best possible way,” said Stuart Webb, from Carrier during the Market Trends session.

Exclusive launch of hydrocarbon TripleAqua heat pump

Presentations on hydrocarbons (HCs) covered a wide variety of applications, from plug-in commercial refrigeration, ultra-low refrigeration systems, to heat pumps and water fountains. As with CO₂, the market demand for hydrocarbons is increasing, with Huayi Compressor Barcelona predicting a 42% increase in demand in 2016 and Red Bull announcing 100% HC procurement in 2014 (except in Japan).

“We are forecasting a growth in propane solutions. At the beginning, when we started working with propane it was not accepted in all world regions, nowadays we can say it is a global refrigerant solution,” said Vicente Guilabert, Huayi Compressor Barcelona, S.L.

In an exclusive product launch Menno Van der Hoff presented the TripleAqua, a heat pump using hydrocarbon refrigerant propæne 433A (a mix of R290 propane and R1270 propene). With a refrigerant charge of less than 5kg, the TripleAqua’s unique design allows it to cool and heat two water supply pipes, individually or at once, enabling building managers to heat and cool different rooms as required.

Natural refrigerant heat pumps reduce energy costs across range of applications

Looking at the food-processing sector Mayekawa and Johnson Controls presented ammonia heat pump case studies that have enabled end users to reduce their energy costs by as much as half. For high temperature needs in the industrial market, a water vapour heat pump was discussed, a solution never presented before at ATMOSphere. Currently being tested by EDF, the water vapour heat pump has achieved promising results, including a COP of 5.4. SANDEN, Mitsubishi Heavy Industries, boostHEAT and ENEA, showcased different CO₂ heat pump solutions for residential and commercial heating.

About shecco

For more than a decade market development expert shecco has been active in helping bring climate friendly technologies faster to market. shecco supports over 100+ partners worldwide in

the HVAC&R sector, where the focus is on sustainable refrigeration, heating & cooling technologies using natural refrigerants. shecco offers a variety of services in three areas: 1) media & publications, including online industry platforms and a catalogue of dedicated research reports; 2) business development, including market research, consultancy and public affairs services, as well as special international projects; and 3) events, including international conferences and national workshops.

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