

solutions for europe

natural refrigerants

Welcome & Introduction

Marc Chasserot, Chairman ATMOsphere Managing Director, shecco Europe EU industry at the forefront of innovation in NR technology TODAY

Policy is an important driver

EU F-Gas Regulation and national legislation & support

More NR solutions are available for different applications, incl. warmer climates

More end-users announce NR are a now standard in new equipment

Policies from UN, US, Japan accelerate the trend on a global scale

BUT

Competition increases: from companies in other regions from low-GWP HFC refrigerants

Natural Refrigerants still a 'niche' = +/- 10% Global HVAC&R

"mainstreaming" of Natural Refrigerants will not happen by itself

Pro-active approach is necessary

Raise Awareness: NR label & Training

Reduce Costs: Lower capital costs, new business models, incentives & subsidies

Increase Availability: Components, Systems, Services, integrated approach, natural refrigerants for AC, high ambients

Innovate and invest in R&D to fill the gaps

Sponsors















































Sponsors

























shecco Publishing 👺















- ADVANCING HVAC&R NATURALLY MAGAZINE
 - ★ first North American online magazine about natural refrigerant technology and beyond
 - ★ end-users, suppliers, policy & more
 - ★ Japanese version coming soon!

Accelerate Japan coming soon

Get more information on articles and your visibility!









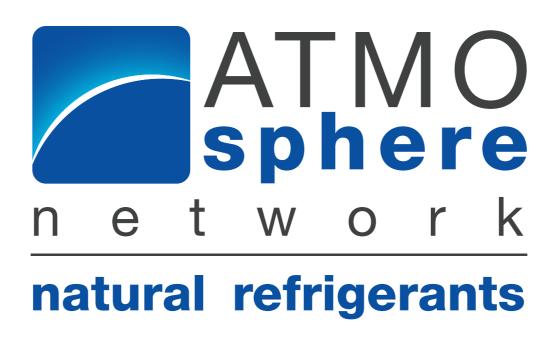
25-26 June 2015 — Atlanta, Georgia



February 2016 in Tokyo



March 2016 in Barcelona





7 April 2015

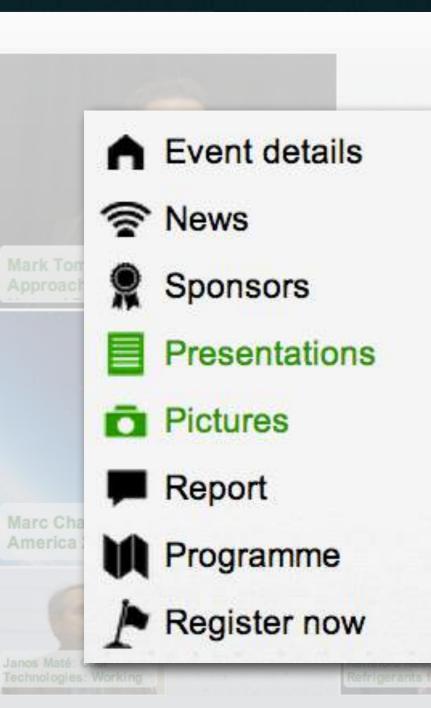


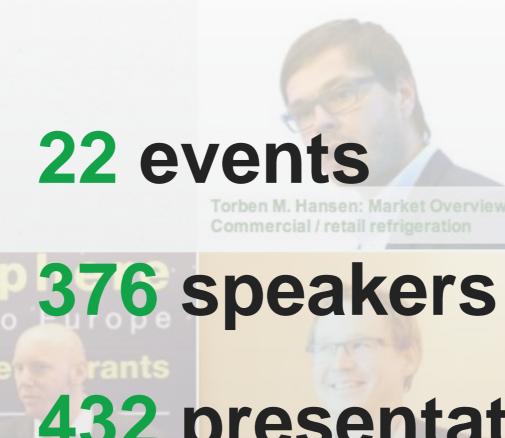
Q4 2015



ATMO by the numbers



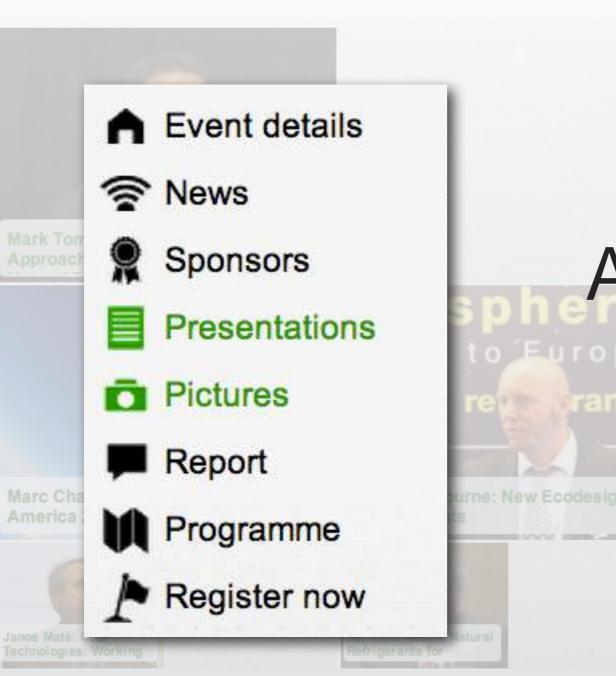








Javier Camargo: Criteria by the Carlos Arruda: CO2 Commercial lingxun Li: Barriers and Ways to Develop R290

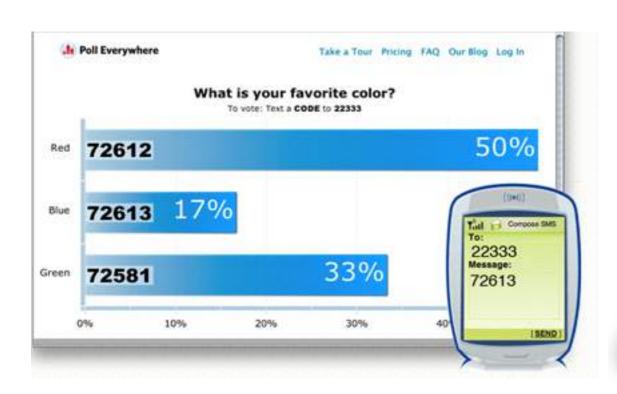




Christian Schmälzle: 100 kW R744

Participate in the interactive polling when questions appear To answer, simply choose from the following options;

Text to +447624806527 **OR** online at www.PollEV.com/ATMO







Activities during ATMOsphere Europe 2015



Polaroid pictures

& Business cards





Reception & Networking Dinner

Monday, 16 March - 19:30



ATMOsphere team will produce a report summarising ATMOsphere Europe 2015 presentations, data and discussions to be sent to ATMOsphere Europe participants later this month.

Participate to the discussion on Twitter by tagging your tweets with the hashtag

#ATMO Europe





16 March 2015

	16 MARCH 2015
08:00	Registration and Welcome coffee - sponsored by Mayekawa
12	INTRODUCTION
09:00	Marc Chasserot, shecco, Welcome speech and introduction day 1
	POLICY SESSION: IMPLEMENTING THE EU F-GAS REGULATION
09:15	Chair: Marc Chasserot, shecco Bente Tranholm-Schwarz, European Commission, Implementing the EU F-Gas Regulation Florian Veyssilier, French Ministry of Ecology, Sustainable Development and Energy, Implementation of the F-Gas Regulation in France Mikkel Aaman Sorensen, Danish Environmental Protection Agency, Socio-economic effects of options for further regulation of HFCs Katja Becken, German Federal Environment Agency, Approaches to implementing the EU Regulation No. 517/2014 in Germany Marco Buoni, Air conditioning Refrigeration European Association (AREA), Refrigerant emissions and leakage-blended learning for alternative refrigerants in a new equipment Juergen Goeller, Carrier Transicold & Refrigeration Systems, Implementation of the new EU F-Gas Regulation - a view from the industry Q&A
11:00	Coffee and Networking break sponsored by

	GLOBAL POLICY SESSION		
11:30	Chair: Sidi Menad Si Ahmed, shecco Phillip Owen, European Commission, Towards a global phase-down of HFCs – an EU response Phillippe Chemouny, Environment Canada, North American Proposal to phase down HFCs under the Montreal Protocol Motoyuki Kumakura, Ministry of the Environment (Japan) - video presentation Clare Perry, Environmental Investigation Agency (EIA), Elements for a successful phase-out of HFCs under Montreal Protocol Q&A		
12:30	Networking Lunch - sponsored by Advansor		
13:00	Product launch: World Premiere: Menno Van der Hoff presents TRIPLEAQUA by Beijer Ref		
13:30	Technomercial: Huayi Compressor Barcelona presents: Propane compressors for light commercial refrigeration		

	MARKET TRENDS SESSION		
14:00	Chair: Nina Masson, shecco		
	Stuart Webb, Carrier, Segment trends - CO ₂ systems in Europe		
	Eric Delforge, Mayekawa, Challenges & drivers for industrial refrigeration and heat pumps		
	Torben Hansen, Advansor, Market trends - Advansor 2015		
	Francesco Mastrapasqua, Epta, Ensuring environmentally sustainable systems stable growth		
	Sylvain Gillaux, SANDEN, SANDEN Europe - Market Trends		
	Nina Masson, shecco, Natural refrigerant market trends in a global context		
1	Q&A		
15:30			
- 20-27	Coffee and Networking break sponsored by		

16:00	Participants will be able to choose between different sessions incl	luding:
	Case Study Session 1: Heat Pumps Technology	Case Study Session 2: Industrial Refrigeration & Other Applications Technology
	Moderator: José Miguel Corberán, Universitat Politècnica de València Jan Boone, Mayekawa, Natural Refrigerants – NH ₃ heat pumps for hot water production Shigeru Yoshida, Mitsubishi Heavy Industries, CO ₂ heat pump water heater for commercial use -	Moderator: Garry Broadbent, Green Cooling Lionel Pourcheresse, Carrier Transicold, Efficient and sustainable transport refrigeration unit using CO ₂ Anthony Bour, Thermo King, CO ₂ sustainable delivery operations with CryoTech temperature controlled solutions
	Michael Miranda, boostHEAT, boostHEAT natural gas-fuelled CO ₂ heat pump Raniero Trinchieri, ENEA, Development of CO ₂	Garry Broadbent & Dave Blinkhorn, Green
	heat pump for DHW production suitable for European climates Gary Shaw & John Burden, Johnson Controls, Cranswick County Foods: new industry standard in energy optimisation and refrigeration	Cooling, HOTREC CO ₂ refrigeration - Canary Whan London by Green Cooling Paul Rivet, AF Consulting, Transcritical R744 for food industry
	José Miguel Corberán, Universitat Politècnica de València, A propane water-to-water heat pump booster for sanitary hot water production	Juan Carlos Rodriguez, Johnson Controls, Fribin energy efficiency combined with increased safety thanks to CO ₂ refrigeration
	Paul De Larminat, Johnson Controls, High temperature water vapour heat pump	Timothy Lorkin, MoveOnn Inside, Magnetic refrigeration - a natural refrigerant technology integration into EU Regulations
	war.	Q&A
18:00	End of Day 1 - Business Exchange & Free Time	
19:30	Reception & Networking Dinner - sponsored by Carrier Dinner Speeches: Jo Leinen, European Parliament, Commercial Refrigeration Europe	Jean Michel Fleury, Carrefour & Adrian Forastier, Carrier



17 March 2015

	17 MARCH 2015		
08:30	Registration and Welcome coffee - sponsored by Maye	kawa	
	COMMERCIAL REFRIGER	RATION APPLICATIONS	
09:00	Participants will be able to choose between different sessions incli	uding:	
	Case Study Session: Commercial Refrigeration 1	Case Study Session: Commercial Refrigeration 2	
	Moderator: Diego Malimpensa, Carel	Moderator: Torben Funder-Kristensen, Danfoss	
	Torben M Hansen, Advansor, Transcritical CO ₂ retail technologies taking Southern tracks	Udo Goerner, EPTA Deutschland, Supermarket CO ₂ transcritical cooling system with heating and air conditioning	
	Diego Malimpensa, Carel, BLDC waterloop systems in commercial refrigeration: the new frontier for natural refrigerants	Torben Funder-Kristensen, Danfoss, Barriers and opportunities for selection of best low GWP technologies	
	Venu Kandi, Emerson Climate Technologies, Hydrocarbons: a viable natural refrigerant solution Or for medium temperature commercial refrigeration applications	Marek Zgliczynski, Embraco, Low global warming alternatives for ultralow cascade applications	
	Vicente Guilabert, Huayi Compressor Barcelona, The lowest energy consumption when using propane LBP fixed speed compressors in a light commercial	Christian Heerup, Danish Technological Institute, CDUs with CO ₂ seen in the light of the F-Gas and ECO design directives	
	refrigeration freezer Erik Wiedenmann, Frigo-Consulting AG, CO ₂	Armin Hafner, SINTEF Energy Research, Italian supermarkets: R744 multi-ejector enhanced parallel compression system	
	refrigeration system for tropical region Q&A	Q&A	
10:30	Coffee and Networking break sponsored by	_cubigel*	

	CONSUMER GOO	os i	END USER PANEL		
11:00	Moderator: Marc Chasserot, shecco	0.1			
	Antoine Azar, The Coca Cola Company, R744 for light common Carlos Alberto Montoya, Imbera, CO ₂ - Imbera development				
	Juergen Brennels, Red Bull, Hydrocarbon bottle cooler in hig				
	Wolfgang Lohbeck, Greenpeace, Why f- gases still are an is		bient temperature conditions		
	Ezra Clark, UNEP, Supporting Refrigerants, Naturally!	-			
	Q&A				
12:00	Networking Lunch - sponsored by EPTA Epta				
12:30	Participants will be able to choose between different sessions including:				
	Technomercial:		Workshop:		
	12:30 Thermo King presents: CryoTech - Time to change		National standards, codes and legislation - Overcoming barriers to the introduction of natural refrigerants across the EU		
	12:50 Blupura presents: R290 and R600 natural refrigerants in drinking water coolers and fountains		(brainstorming session for European Commission study under the EU F-Gas Regulation); Arno Kaschl (European Commission), Ray Gluckman (consultant)		
	13:10 Carel presents: CAREL retail system for CO ₂ convenience store	Or	(European Commission), ray Chackman (Consultant)		
	13:30 Emerson Climate Technologies presents: Emerson solutions for natural refrigerant systems				
	13:50 Danfoss video: Engineering the supermarket of tomorrow				

	FOOD RETAILER PANEL	
14:00	Moderators: Marc Chasserot, shecco Jean Michel Fleury, Carrefour, Natural refrigeration current status - "Guest star": Alzira Valencia Olaf Schulze, METRO AG, METRO F-Gas Exit Program [FEP] 2015 - 2025 Georgios Patkos, Delhalze, Refrigeration at Delhalze Gabriel Romero, Auchan Super Spain, Simply Gordoniz Bilbao (Spain) - CO ₂ transcritical booster Amad Hafez, Modelo Continente Hipermercados, SONAE'S experience with sub-critical systems Michel de Rooj, AHOLD, Ahold's steps to proven sustainability Q&A	
15:15	Coffee and Networking break sponsored by SUPPLIER PANEL	
15:45		
17:00	Conclusions and farewell drink - sponsored by SANDEN	



Thank you very much!

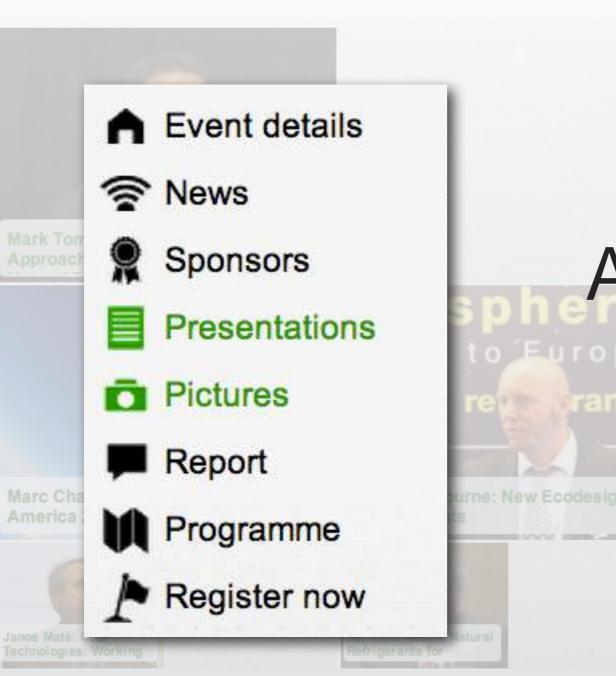
Standup please!





solutions for europe

natural refrigerants

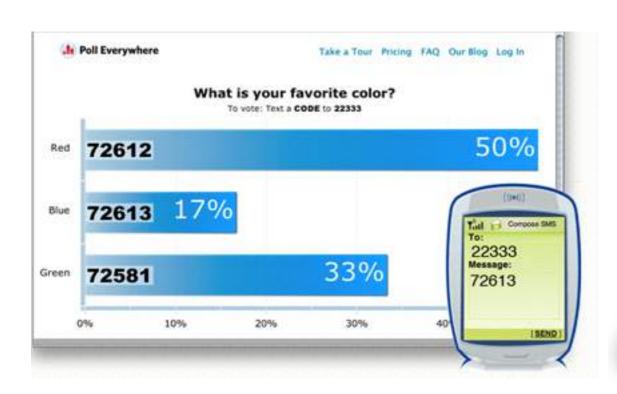




Christian Schmälzle: 100 kW R744

Participate in the interactive polling when questions appear To answer, simply choose from the following options;

Text to +447624806527 **OR** online at www.PollEV.com/ATMO









ATMOsphere team will produce a report summarising ATMOsphere Europe 2015 presentations, data and discussions to be sent to ATMOsphere Europe participants later this month.

Participate to the discussion on Twitter by tagging your tweets with the hashtag

#ATMO Europe





17 March 2015

	17 MARCI	H 2015
08:30	Registration and Welcome coffee - sponsored by Mayek	awa
	COMMERCIAL REFRIGER	ATION APPLICATIONS
09:00	Participants will be able to choose between different sessions include	ding:
	Case Study Session: Commercial Refrigeration 1	Case Study Session: Commercial Refrigeration 2
	Moderator: Diego Malimpensa, Carel	Moderator: Torben Funder-Kristensen, Danfoss
	Torben M Hansen, Advansor, Transcritical CO ₂ retail technologies taking Southern tracks	Udo Goerner, EPTA Deutschland, Supermarker CO ₂ transcritical cooling system with heating and air conditioning
	Diego Malimpensa, Carel, BLDC waterloop systems in commercial refrigeration: the new frontier for natural refrigerants	Torben Funder-Kristensen, Danfoss, Barriers and opportunities for selection of best low GWF technologies
	Venu Kandi, Emerson Climate Technologies, Hydrocarbons: a viable natural refrigerant solution Or for medium temperature commercial refrigeration applications	Marek Zgliczynski, Embraco, Low global warming alternatives for ultralow cascade applications
	Vicente Guilabert, Huayi Compressor Barcelona, The lowest energy consumption when using propane LBP fixed speed compressors in a light commercial	Christian Heerup, Danish Technological Institute CDUs with CO ₂ seen in the light of the F-Gas and ECO design directives
	refrigeration freezer	Armin Hafner, SINTEF Energy Research, Italian supermarkets: R744 multi-ejector enhanced paralle
10.5	Erik Wiedenmann, Frigo-Consulting AG, CO ₂ refrigeration system for tropical region	compression system
18 6	Q&A	Q&A
10:30		
(+)	Coffee and Networking break sponsored by	CUDION .

	CONSUMER GOOD)S I	END USER PANEL	
11:00	Moderator: Marc Chasserot, shecco	0		
	Antoine Azar, The Coca Cola Company, R744 for light commercial applications			
	Carlos Alberto Montoya, Imbera, CO ₂ - Imbera development	upda	ate	
	Juergen Brenneis, Red Bull, Hydrocarbon bottle cooler in high ambient temperature conditions			
	Wolfgang Lohbeck, Greenpeace, Why f- gases still are an issue Ezra Clark, UNEP, Supporting Refrigerants, Naturally!			
	Q&A			
12:00	Networking Lunch - sponsored by EPTA Epta			
12:30	Participants will be able to choose between different sessions including:			
	Technomercial:		Workshop:	
	12:30 Thermo King presents: CryoTech - Time to change 12:50 Blupura presents: R290 and R600 natural		National standards, codes and legislation - Overcoming barriers to the introduction of natural refrigerants across the EU (brainstorming session for European Commission	
	refrigerants in drinking water coolers and fountains		study under the EU F-Gas Regulation); Arno Kaschl	
	13:10 Carel presents: CAREL retail system for CO ₂ convenience store	Or	(European Commission), Ray Gluckman (consultant)	
	13:30 Emerson Climate Technologies presents: Emerson solutions for natural refrigerant systems			
	13:50 Danfoss video: Engineering the supermarket of tomorrow			

	FOOD RETAILER PANEL
14:00	Moderators: Marc Chasserot, shecco Jean Michel Fleury, Carrefour, Natural refrigeration current status - "Guest star": Alzira Valencia Olaf Schulze, METRO AG, METRO F-Gas Exit Program [FEP] 2015 - 2025 Georgios Patkos, Delhalze, Refrigeration at Delhalze Gabriel Romero, Auchan Super Spain, Simply Gordoniz Bilbao (Spain) - CO ₂ transcritical booster Amad Hafez, Modelo Continente Hipermercados, SONAE'S experience with sub-critical systems Michel de Rooj, AHOLD, Ahold's steps to proven sustainability Q&A
15:15	Coffee and Networking break sponsored by
	SUPPLIER PANEL
15:45	Moderators: Marc Chasserot, shecco Davide Refosco, SCM Frigo, Nature and technology working as one Sergio Girotto, Enex, Enex - leading in refrigeration Torben Hansen, Advansor, Carbon footprint of natural refrigerant solutions Micael Antonsson, Green & Cool, Refrigeration market trends Jürgen Süß, efficient energy, Natural water Francesco Mastrapasqua, Epta, Driving the change: the lean approach to green thinking
17:00	Q&A Conclusions and farewell drink - sponsored by SANDEN
17.00	E MARIE AND THE PROPERTY OF TH

Standup please!





Thank you very much!