

## Participation

Attendance fee: 420,00 € + VAT

(Incl. evening programme on June 22<sup>nd</sup> and symposium package on June 22<sup>nd</sup> & 23<sup>rd</sup> June)

During the symposium and the evening event there will be a free bus transfer from the hotels in Schaffhausen to the venues and back.

## Accommodation

Hotel room allotments in several hotels are available by quoting the reference "eurammon":

Hotel & Restaurant Promenade: until 30<sup>th</sup> April, 2017

arcona LIVING Schaffhausen: until 28<sup>th</sup> April, 2017

### Hotel & Restaurant Promenade

Fäsenstaubstrasse 43

8200 Schaffhausen

Phone: +41 (0)52 630 77 77

Fax: +41 (0)52 630 77 78

info@promenade-schaffhausen.ch

www.promenade-schaffhausen.ch

### arcona LIVING Schaffhausen

Mühlentalstrasse 2

8200 Schaffhausen

Phone: +41 52 63100-00

Fax: +49 381 45 85-108

reservation@schaffhausen.arcona.ch

www.schaffhausen.arcona.ch

## Dear symposium participants,

The refrigeration and air-conditioning industry is going through major changes driven by the enforcement of the European F-Gas Regulation. A milestone has been achieved for international climate protection on a global level: in Kigali where more than 150 countries agreed to gradually reduce the use of fluorocarbons. This agreement offers huge potential for the use of natural refrigerants, not just in refrigeration technology but also increasingly with heat pumps and air-conditioning systems. Natural refrigerants make an essential contribution to reducing greenhouse gases while offering planning and investment security for system operators. Furthermore, the energy efficiency of natural refrigerants has been repeatedly verified.

Our symposium will be looking at applications in the small scale range up to 200 kW with a special focus on hydrocarbons. International experts will be reporting on the aspects to be heeded for working successfully with natural refrigerants, indicating applications where they offer outstanding solutions. Discuss with our speakers and find out from the winners of the Natural Refrigeration Award 2017 how young scientists are constantly driving refrigeration and air-conditioning technology into the future.

We hope you will enjoy attending the symposium and have great pleasure in sharing your own experience directly with participants and experts.

## Best regards



Bernd Kaltenbrunner  
eurammon  
Chairman of the Board



Mark Bulmer  
eurammon  
Member of the Board

KWN Engineering GmbH  
Managing Director

Georg Fischer Piping Systems Ltd.  
Head of Global Market  
Development & Innovation

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refrigerants delivered by mother nature

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### eurammon

Lyoner Straße 18  
D-60528 Frankfurt am Main  
www.eurammon.com

### Venue

22nd & 23rd June, 2017  
Klostergut Paradies  
Klostergutstraße 4  
CH-8252 Schlatt (near Zurich)  
Phone: +41 (0)52 631 27 27  
www.klostergutparadies.ch

### Contact

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## Thank you to ...



Klaas Visser



## Small Applications <200 kW with Natural Refrigerants eurammon symposium



Thursday, June 22<sup>nd</sup>, 2017  
13:30 – 17:40

Friday, June 23<sup>rd</sup>, 2017  
09:30 – 16:00

Klostergut Paradies, Klostergutstraße 4  
CH-8252 Schlatt (near Zurich)

Registration conditions: Please register by submitting the registration coupon. We will send you a confirmation of your registration. Registrations will be dealt within the received order. Cancellations have to be in written form. eurammon charges 50 % of the attendance fee for cancellations received after June 08<sup>th</sup>, 2017.

## Programme

Thursday, June 22<sup>nd</sup>, 2017

### Lecture event

13:00 – 13:30 REGISTRATION / WELCOME COFFEE

### PART 1: REGULATIONS AND REQUIREMENTS

13:30 – 13:35 **Greeting**  
Bernd Kaltenbrunner,  
Chairman of the Board

13:40 – 14:05 **Standards and Regulations:  
Updates for Flammable Refrigerants**  
Frank Rinne,  
Emerson Climate Technologies GmbH

14:10 – 14:35 **Legal Framework Conditions for the  
Use of Natural Refrigerants in Switzerland**  
Henry Wöhrschimmel,  
Bundesamt für Umwelt BAFU (Schweiz)

14:40 – 15:05 **Safety Aspects for the Use of Hydrocarbons  
as Refrigerants**  
Thorsten Lerch & Ralf Catanescu,  
Bundesfachschule Kälte-Klima-Technik (Maintal)

15:10 – 15:40 COFFEE BREAK

15:45 – 16:10 **Energy Efficiency and Life Cycle Costs of a  
NH<sub>3</sub> Evaporative Condenser**  
Michael Rabenstein,  
Evapco Europe GmbH

16:15 – 16:40 **Commercial Refrigeration Systems with R290  
and R1270 – Criteria for the Selection and  
Layout of Components and Pipework**  
Hermann Renz,  
BITZER Kühlmaschinenbau GmbH

16:45 – 16:55 **Ceremony Natural Refrigeration Award 2017**

16:55 – 17:40 **Presentations of the Natural Refrigeration  
Award Winners**

**EVENING PROGRAMME** - Boat tour on the Rhine River

Friday, June 23<sup>rd</sup>, 2017

9:00 – 09:30 REGISTRATION / WELCOME COFFEE

### PART 2: SMALL APPLICATIONS WITH NATURAL REFRIGERANTS <200 kW

09:30 – 09:40 **Greeting**  
Mark Bulmer,  
Georg Fischer Piping Systems Ltd.

09:40 – 10:05 **Water- and Air Cooled Chiller with  
Propane R290**  
Kevin Dujardin,  
Alpiq InTec West AG,  
Johann Herunter,  
FRIGOPOL Kälteanlagen GmbH

10:10 – 10:35 **Advantages of Adiabatic Pre Cooling Regarding  
CO<sub>2</sub> Transcritical Gascoolers in Supermarket**  
Michael Freiherr,  
Güntner GmbH & Co. KG

10:40 – 11:20 COFFEE BREAK

11:25 – 11:50 **R290 Chiller for Biogas Cooling**  
Karl Huber,  
HKT Huber-Kälte-Technik GmbH

11:55 – 12:20 **Case Study: Small Applications  
with Ammonia**  
Danny McDougall,  
Star Refrigeration Ltd.

12:25 – 13:40 LUNCH

13:45 – 15:50 **Interactive workshop for all participants**  
Moderation: Mark Bulmer,  
Georg Fischer Piping Systems Ltd.

15:50 – 16:00 **Concluding remarks**

End of the event