

EUROVENT INDIA EXPERT WORKSHOP

ENERGY EFFICIENT INDOOR AIR QUALITY SOLUTIONS

DATE & TIME

26 SEPTEMBER 2024

16:00-21:00H (LOCAL TIME)

VENUE

**ITC Grand Central
Mumbai**

MAHARASHTRA, INDIA

ORGANISERS



MEDIA
PARTNER

THERMAL CONTROL
BUSINESS UPDATE

OUTREACH
PARTNER



Welcome

Mr Markus Lattner
International Director
Eurovent



Welcome remarks: Outgoing Eurovent India Chairman

Mr Devraj Singh
Managing Director
FläktGroup



Welcome remarks: Incoming Eurovent India Chairman

Mr Alok Bhardwaj
Vice-President
Systemair India



Moderator



Mr Vanshaj Kaul
Director India
Eurovent

Agenda

Timing	Title	Speaker
17:00-17:10h	Welcome remarks	
17:10-17:20h	Assessment of impact of IAQ in small commercial buildings: A case study of Delhi NCR	Mr Brijesh Pandey Senior Research Associate AEEE
17:20-17:35h	Air Filtration: Impacts and benefits of IAQ	Mr Stanley O Mathew Head Sales & Marketing AAF India
17:35-17:50h	Air Filtration: Selection of ISO 16890 rated air filters for general ventilation purposes	Mr Anil Nair Head – Projects & Applications Camfil India
17:50-18:05h	Fans: Energy efficient fans for air handling units	Mr Nitin Tiwari Asst. General Manager Sales ebm-papst

Agenda

Timing	Title	Speaker
18:05-18:20h	Fans: Efficiency and benefits of direct driven fans	Mr Prashant Gore Manager Engineering & Applications ZIEHL-ABEGG
18:20-18:30h	Q&A session	
18:30-19:00h	Coffee break	
19:00-19:15h	Energy recovery wheels for energy efficient IAQ	Mr Rahul Aeron Vice-President DRI
19:15-19:35h	Eurovent Recommendation 6/18: Quality criteria for Air Handling Units	Mr Alok Bhardwaj Vice-President Systemair

Agenda

Timing	Title	Speaker
19:35-19:50h	Air Handling Units: Life cycle cost analysis for air handling units in hot and humid climates	Mr Arvind Singh Director FläktGroup India
19:50-20:00h	Eurovent certification for air handling units in hot and humid climates	Mr Markus Lattner International Director Eurovent
20:00-20:30h	Q&A session	
20:45h	Networking dinner	

Workshop Partners

Outreach Partner



Event Partner



Media Partner

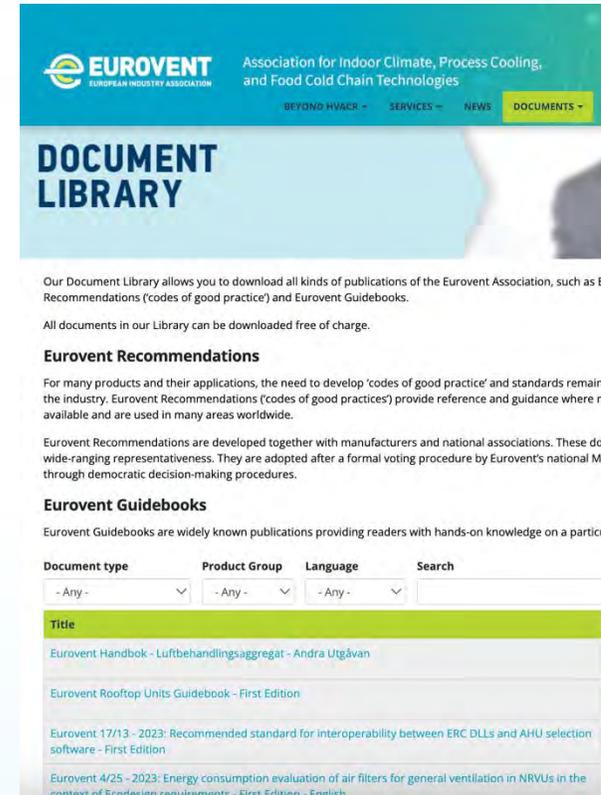


Print Partner



Eurovent

- The ‘European’ HVACR association
- Industry representation, technical & regulatory affairs, standardisation, international affairs
- 200+ members in Europe, Middle East, India



The screenshot shows the Eurovent Document Library website. At the top, there is a navigation bar with the Eurovent logo and the text "Association for Indoor Climate, Process Cooling, and Food Cold Chain Technologies". Below this, there are menu items: "BEYOND HVACR", "SERVICES", "NEWS", and "DOCUMENTS". The main heading is "DOCUMENT LIBRARY".

Below the heading, there is a paragraph: "Our Document Library allows you to download all kinds of publications of the Eurovent Association, such as Eurovent Recommendations ('codes of good practice') and Eurovent Guidebooks. All documents in our Library can be downloaded free of charge."

There are two sections: "Eurovent Recommendations" and "Eurovent Guidebooks".

The "Eurovent Recommendations" section states: "For many products and their applications, the need to develop 'codes of good practice' and standards remains the industry. Eurovent Recommendations ('codes of good practice') provide reference and guidance where not available and are used in many areas worldwide. Eurovent Recommendations are developed together with manufacturers and national associations. These documents have wide-ranging representativeness. They are adopted after a formal voting procedure by Eurovent's national Member Associations through democratic decision-making procedures."

The "Eurovent Guidebooks" section states: "Eurovent Guidebooks are widely known publications providing readers with hands-on knowledge on a particular product or issue."

At the bottom, there is a search filter table:

Document type	Product Group	Language	Search
- Any -	- Any -	- Any -	<input type="text"/>

Below the filter table is a list of documents with "Download" buttons:

Title	Download
Eurovent Handbok - Luftbehandlingsaggregat - Andra Utgåvan	Download
Eurovent Rooftop Units Guidebook - First Edition	Download
Eurovent 17/13 - 2023: Recommended standard for interoperability between ERC DLLs and AHU selection software - First Edition	Download
Eurovent 4/25 - 2023: Energy consumption evaluation of air filters for general ventilation in NRVUs in the context of French requirements - First Edition - English	Download



Eurovent India

- Established in 2022
- Eurovent members & certified companies
- Education, awareness, standards



Follow us on YouTube & LinkedIn



www.youtube.com/@euroventclimanovela

www.linkedin.com/company/eurovent-india/

Introduction

Mr Markus Lattner
International Director
Eurovent



When your AHU has issues...



The Case

- Large infrastructure project
- 60 AHUs installed (first phase)
- 1/3rd showing symptoms within 18 months of operation
- More failures expected



The History

- Certified units specified
- Cheap option chosen
- **Savings achieved compared to best in class approx. 1.240.000US\$ (across 60 units)**
- Flawed Installation
- Poor operation & maintenance protocols

The Assumption

- Operation 24/7
- Projected lifespan 15 years
- Energy consumption difference between class A and C (at lifetime) per unit more than. 200.000 US\$ (total 12MUS\$)

➤ **Under optimal O&M conditions**

The Reality

- 20 units need replacement after less than 3 years
- Expected further replacement requirements of rest within 5 years
- Current energy consumption up to twice the certified performance
- Degradation and contamination of air, ducts, spaces
- Lack of performance

The Damage

• 20 units with better quality, performance ...	700.000
• Installation and replacement costs ...	200.000
• Energy consumption penalty 3 years. ...	2.400.000
• Excessive consumption (33% of units) ...	800.000
Total damage after 3 years...	4.000.000

Not including administrative costs, time, damage to ducts and spaces...

INITIAL SAVINGS: 1.240.000 US\$
DAMAGE AFTER 3 YEARS: 4.000.000 US\$
(estimated)

Sustainability

Energy



Total Cost of Ownership

Durability