

INTERNATIONAL CONFERENCE

# ENERGY IN BUILDINGS ATHENS 2025

ΥΠΟ ΤΗΝ ΑΙΓΙΔΑ ΤΟΥ TEE

SATURDAY  
NOVEMBER 15, 2025

- DECARBONIZATION & ENERGY SECURITY
- SUSTAINABILITY & GREEN TRANSITION
- ARTIFICIAL & BUILDING INTELLIGENCE
- ENERGY SAVING IN COMMERCIAL & INDUSTRIAL APPLICATIONS

09:00-18:00 | @ DIVANI CARAVEL HOTEL, ATHENS

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## A fragmented opportunity:

Unlocking the potential of HVAC in Europe's building legislation



# A fragmented opportunity:

Unlocking the potential of HVAC in Europe's building legislation

**ASHRAE's 'Energy in Buildings' Conference | 15 November 2025 | Athens**

Dominik Flikweert, Head of Public Affairs EMEA, Systemair

# Today's content

## 1) **New EU requirements for buildings**

What are the opportunities for HVAC?

## 2) **Reality of self-inflicted market fragmentation**

What are the risks for HVAC?

## 3) **Your role in optimising HVAC opportunities**

How can the HVAC sector cover for a lack of market harmonisation?



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# 1) EU's Energy Performance of Buildings Directive

Introducing new energy efficiency limits & mandatory IAQ standards



# Why new building requirements in Europe?

- > 75 % has a poor energy performance
- > Use 40 % of Europe's total energy demand
- > Responsible for 50 % of our total demand for gas
- > Generate 1/3 of Europe's GHG emissions
- > 1/4 of Europeans live under unhealthy IAQ levels



# Consequences of bad IAQ?



Sickness → 150,000/y premature deaths



Absence & Productivity → € 260 B/y GDP loss



Energy → up to 26 % savings unutilised



# Continued focus on sustainability of buildings

## New EU Energy Performance of Buildings Directive 2024/1275 (EPBD)

- > Introducing **Renovation Passports**
- > **National Building Renovation Plans (NBRPs)**
- > **Mandatory Smart Readiness Indicator (SRI)**
- > **Mandatory Environmental Product Declarations (EPDs)**
- > Member State implementation deadline: 29 May 2026



# EPBD's new tools for building sustainability

NBRP	SRI	EPD
<ul style="list-style-type: none"> <li>&gt; <b>What:</b> comprehensive plan by each Member State outlining its plan to decarbonise and renovate its building stock</li> <li>&gt; <b>How:</b> policies, investments, with milestones in 2030, 2040, and 2050</li> <li>&gt; <b>When &amp; deadline:</b> <ul style="list-style-type: none"> <li>- 31 Dec 2025 for draft versions</li> <li>- 31 Dec 2026 for final NBRP</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>&gt; <b>What:</b> metric for a building's potential to be equipped with smart technologies: <ul style="list-style-type: none"> <li>- optimising energy efficiency</li> <li>- adapting to occupant needs</li> <li>- demand/response with grid</li> </ul> </li> <li>&gt; <b>How:</b> separate SRI regulation on non-residential buildings (rated output HVAC &gt;290 kW)</li> <li>&gt; <b>When &amp; deadline:</b> <ul style="list-style-type: none"> <li>- 30 Jun 2027</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>&gt; <b>What:</b> document verifying a product's Life Cycle Assessment (LCA) in accordance with EN 15978 (and ISO 14000-series and EN 15804 for HVAC)</li> <li>&gt; <b>How:</b> standards on calculating LCA expressed as kgCO<sub>2</sub>eq/m<sup>2</sup> for a reference period of 50 yrs</li> <li>&gt; <b>When &amp; deadline:</b> <ul style="list-style-type: none"> <li>only applying to new buildings</li> <li>- 1 Jan 2028: &gt;1000 m<sup>2</sup></li> <li>- 1 Jan 2030: all new buildings</li> </ul> </li> </ul>



# ... with comfort, health, and wellbeing

## New in EPBD: **mandatory Indoor Environmental Quality (IEQ):**

- > Member States must ensure **adequate IEQ standards for healthy indoor climate**
- > EPCs must include **recommendations for optimal IEQ**
- > **BACS must have minimum IEQ functions:**
  - >290 kW buildings from 2024 and >70 kW buildings from 2029
- > **SRI with focus on IEQ:** mandatory from 30 September 2029

Does that mean  
we have **Healthy Building** now?

**Several pitfalls must first be overcome to reach the potential of HVAC**



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## 2) Market fragmentation

Europe's self-imposed limits of the potential of HVAC



# Internal division: worse than tariffs

Europe is faced with a **need for increased competitiveness, economic & geopolitical challenges**, and an **energy & environmental transition**

- > EU's Apr 2024 Letta Report: we need a true Single Market for growth
- > EU's Sep 2024 Draghi Report: different admin burdens are too high
- > IMF's Oct 2024 EU assessment: **internal market fragmentation costs are equal to 44 % tariff on goods and 110 % on services**

*And Europe risks fragmenting the EPBD's opportunities as well...*

# Responsibility of EU's Member States

- > Transposition deadline  
**29 May 2026**
- > This includes IAQ measures
- > For EPDs, deadline is  
**1 Jan 2028**

***Will Member States do it right?***



# IEQ: what even is it?



(66) *'indoor environmental quality' means the result of an **assessment of the conditions** inside a building **that influence the health and wellbeing of its occupants**, based upon **parameters** such as those relating to the temperature, humidity, ventilation rate and presence of contaminants.*



- What kind of assessment?
- Influence how?
- Which parameters?
- 'Such as' is non-exhaustive?



**Everything is so vague:  
are Member States good with that?**



*This is tricky: opportunities for some (such as lighting and **ventilation**), but also, a possible cause of deviation between Member States*



# IEQ: 27 different EU requirements?

## Member States now must decide on:

- > Which 'adequate IEQ standards'?
- > What is a 'healthy indoor climate'?
- > What recommendations in EPCs?

## Risk of further market fragmentation, slowing down IEQ uptake!

- > BACS: focus on non-residential, and what are 'minimum functions'?
- > SRI: potential for IEQ but with many uncertainties

**Note:** EU Commission's FAQ (C/2025/4143) provides guidelines of possible IAQ measures, but no clear harmonisation of instructions on how to align Member State legislation

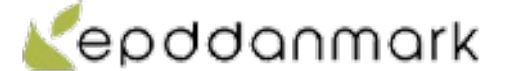
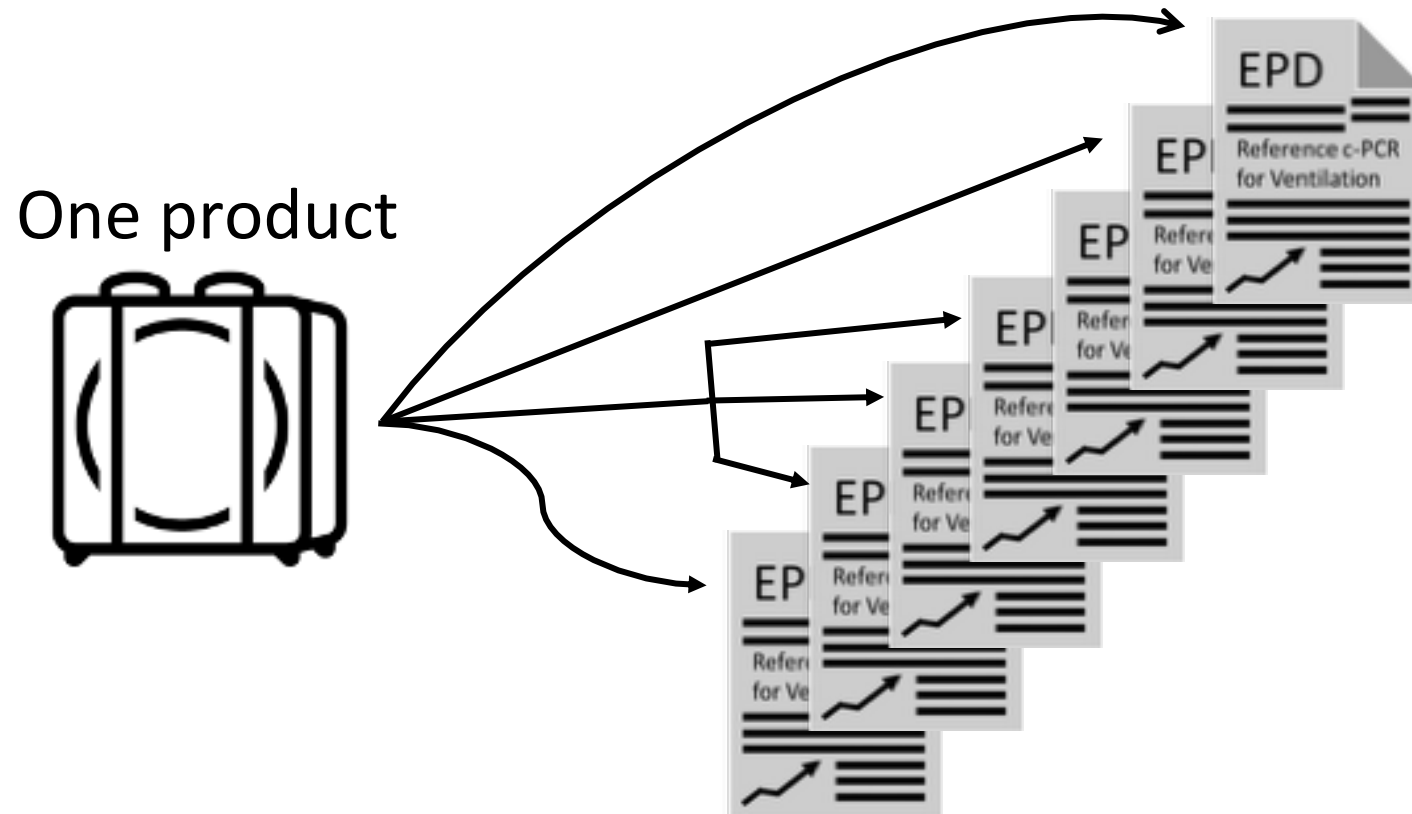
### Reminder

For the first time ever, the EPBD sets mandatory IEQ requirements:  
• Member States obliged to ensure **adequate IEQ standards for a healthy indoor climate**

- EPCs must include **recommendations for optimal IEQ**
- **BACS must have minimum IEQ functions:**  
>290 kW buildings from 2024 and >70 kW buildings from 2029
- **SRI with focus on IEQ:** mandatory from 30 September 2029

# EPDs: missing level playing field in Europe

Different EPDs for Member State, region, etc.



*And more...*



Is there anything that  
the **HVAC** sector can do?



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# 3) Optimising HVAC opportunities

Your importance in fostering a win-win-win between IAQ, sustainability, and a growing HVAC sector in Europe

# Existing tools ensuring EPBD compliance

Two widely existing tools independently assessing HVAC performance in buildings:  
**Passive House Institute (PHI)** and **Eurovent Certified Performance (ECP)**

	PHI	Eurovent
> <b>Focus</b>	Component in Passive House Planning Package (PHPP) for Passivhaus buildings	Independent product performance and data verification: compliance with rules
> <b>Frequency &amp; process</b>	Once: assess performance via PHPP	Every 2 yrs, incl. factory audits
> <b>Range certification</b>	No: manufacturers choose models	Yes: all models in range must be certified within 3 yrs
> <b>EN 13141-7:2021</b>	Used to calculate building's energy use	Used to assess alignment with EU Ecodesign legislation
> <b>Legislative assessment</b>	Supports PHI building standard	Assesses compliance with EU Ecodesign and EPBD requirements
> <b>Application</b>	Ideal for use in PHI-certified buildings	HVAC used in all residential and non-residential applications



# Fostering a healthier world through a common IAQ understanding

Need for a **harmonised application of IAQ** to foster level playing field and competition

## 1) Eurovent Recommendation on IAQ

- > Simple metric based on CO<sub>2</sub> and airflow (based on EN 16798-1)

Level	CO <sub>2</sub> concentration	Min. outdoor airflow per person
Recommended	< 900 ppm	> 36 m <sup>3</sup> /h (10 l/s)
Acceptable**	900-1200 ppm	25-36 m <sup>3</sup> /h (7-10 l/s)
Poor	> 1200 ppm	< 25 m <sup>3</sup> /h (7 l/s)

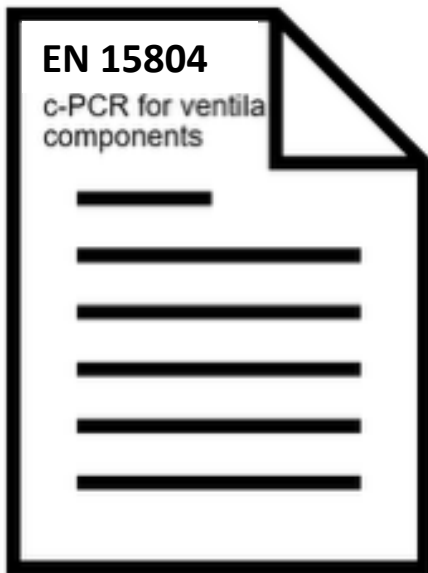
## 2) REHVA Guide on IEQ under the EPBD

- > Clear explanation on applying the different IAQ measures from EU Commission's FAQ (C/2025/4143)





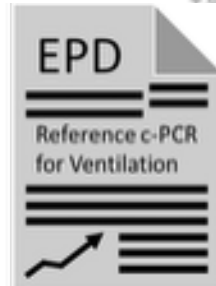
# Supporting a European approach for EPDs



One product



One EPD



**Valid across Europe**

*Reminder: mandatory EPDs as of 1 Jan 2028*



# Together, we can make IAQ and sustainability a reality

- > Eurovent Certified Performance and PHI: **Established assessments of compliance** with EPBD requirements
- > Eurovent and REHVA: **Sector consensus on IAQ** application
- > CEN/TC156 WG26 (EN 15804): **Efforts to standardise cPCRs for EPDs in Europe**



# Q&A





# Thank you for your attention!



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# THANK YOU! Q & A

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