

# Air Infiltration and Ventilation Centre

## EBC ANNEX 5

EBC Annex 5 'Air Infiltration and Ventilation Centre' (AIVC) has been running for 45 years since its inauguration in 1979. During this extended operational period, the AIVC has been routinely reshaping its priorities to reflect emerging concerns and to answer new challenges and opportunities, serving its principal goal to provide reference information on ventilation and air infiltration in the built environment with respect to efficient energy use and good indoor environmental quality (IEQ). In a world striving to achieve net zero greenhouse gas emissions by 2050, the role of energy efficient ventilation in enhancing IEQ and occupant health in buildings is pivotal and emphasizes the significance for the AIVC's continuing activities.

### Objectives

The objectives of the AIVC are as follows:

- enabling the production of high quality and influential documents of international status regarding energy efficient ventilation and air infiltration;
- generating strategic advice and design guidance on air infiltration and ventilation related issues in new and renovated buildings;
- communicating and disseminating information in relation to smart ventilation, resilient ventilative cooling, building and ductwork airtightness and indoor environmental quality, through conferences and workshops, webinars, databases, social media, and a high visibility web presence.

### Deliverables

- Events: the AIVC Annual Conference, one to two workshops per year on specific topics, and one to two webinars per year;
- Publications: conference and workshop proceedings, technical notes, and contributed reports (one per year), and a biannual newsletter.

### Progress

In 2024, the AIVC focused its work mainly on 13 projects, the AIVC Industry Advisory Committee, the 44th AIVC

Annual Conference, 'Retrofitting the Building Stock: Challenges and Opportunities for Indoor Environmental Quality', a workshop held in Singapore, 'Ventilation, IEQ and Sustainability', and eight webinars. Furthermore, the AIVC facilitated remote discussions and supported dissemination activities for EBC Annex 78 'Supplementing Ventilation with Gas-phase Air Cleaning, Implementation and Energy Implications', and EBC Annex 87 'Personalized Environmental Control Systems'.

The latest AIVC projects launched include the following:

- Definition on indoor environmental health, and
- Ventilative cooling and thermal comfort in national energy performance of buildings regulations.

The following previously launched projects continued during 2024:

- Measurement for exterior wall airtightness of high-rise buildings using stack effect/individual air conditioning and outdoor air entering through entrance doors,
- Designing building ventilation for epidemic and disaster preparedness,
- The European Union Energy Performance of Buildings Directive (EPBD) revision and ventilation,
- Energy recovery ventilation,
- Personalized environmental control systems (PECS),
- Building and ductwork airtightness regulations in various countries,
- Building ventilation regulations in various countries,
- Temperature take-back effect in the context of energy efficient ventilation strategies,
- Indoor air quality metrics,
- Supplementing ventilation with gas-phase air cleaning, and
- Competent tester schemes for building airtightness testing.

In 2024, the AIVC released several key publications:

- Technical Note TN 73: Overview of the trends in building and ductwork airtightness in 16 countries.

AIVC Board meeting held in Dublin, Ireland, in October, 2024  
Source: EBC Annex 5 AIVC



[www.aivc.org](http://www.aivc.org)



- Five Ventilation Information Papers (VIPs) focusing on trends in building and ductwork airtightness in Japan, Republic of Korea, New Zealand, USA and Germany.
- Two VIPs on trends in building ventilation requirements and inspection in Spain and France.
- VIP 49: Resilient Cooling of Buildings.

Also in 2024, the AIVC hosted a series of eight webinars covering a variety of topics as listed below:

- AIVC and TightVent organized a webinar on airtightness tests for high-rise buildings,
- A webinar on new standards, guidelines and regulations for ventilation due to COVID-19,
- Two webinars co-organized by AIVC and Venticool were focused on ventilative cooling and thermal comfort (design and performance assessment of ventilative cooling, exploring window opening behaviour for optimal cooling and thermal comfort),
- A webinar looking into new developments in design and characterisation of energy-efficient ventilation systems,
- A webinar exploring the topic of personalized environmental control system (PECS) in action with insights from case studies, and
- Two webinars by AIVC and TightVent addressing building airtightness impact on energy performance calculations, and building and ductwork airtightness trends and regulations in China, Japan and New Zealand.

To further develop the aims of the AIVC and to keep a broad perspective on the fields of ventilation, infiltration, and IEQ, the AIVC Board established an Industry Advisory Committee in 2023. This is a group of voluntary industry leaders dedicated to the goals of the AIVC, representatives of industry but not exclusively advocating for industry, who are proposed and retained at the discretion of the board of the AIVC. Members cover different sectors, geographical areas, and fields of interest for AIVC activities. Its mission is to serve as a voice for the industry

in AIVC activities, providing feedback on Board proposals and decisions; formulate suggestions for future work and provide advisory feedback on publications and other AIVC products; help to disseminate AIVC deliverables to industry and practitioners and amplify outreach. The advisory committee meets remotely twice a year to give timely feedback in advance of AIVC board meetings.

AIVC maintains a strong and close collaboration with the TightVent and venticool platforms. To foster greater interaction with related organizations and enhance its societal impact, AIVC is also a founding member of the Indoor Environmental Global Alliance and has collaboration agreements with ASHRAE, REHVA, ABAA and ISIAQ.

AIVC continues to facilitate collaboration between various initiatives. For example, the Advisory Board of Practitioners (ABoP), an initiative launched in 2021 by EBC Annex 80, AIVC and venticool, facilitates regular exchange between Annex 80 scientists, practitioners, planners and representatives from relevant industries. As of 2024, following the completion of EBC Annex 80, the ABoP operates under the joint umbrella of AIVC and venticool.

### Meetings

The AIVC Board organized two board meetings in 2024, which were held in:

- Singapore in April, 2024, and
- Dublin, Ireland in October, 2024

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#### Project duration

1979–2026

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#### Co-Operating Agents

Peter Wouters, INIVE vzw, Belgium

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#### Participating countries

Australia, Belgium, Canada, Denmark, France, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Republic of Korea, Spain, Sweden, United Kingdom, USA

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#### Further information

[www.iea-ebc.org](http://www.iea-ebc.org)