

Air Infiltration and Ventilation Centre

EBC ANNEX 5

EBC Annex 5 'Air Infiltration and Ventilation Centre' (AIVC) has been running for 43 years since its inauguration in 1979. During this extended operational period, the Centre has been continuously reshaping to reflect emerging concerns and answer to 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 the midst of another 'energy shock', adequate ventilation provision may be put at risk, with the spotlight on the AIVC. The Centre sees this global energy crisis as an opportunity to enhance its networking and dissemination activities and emphasize the significance of ventilation in providing acceptable indoor air quality (IAQ).

Objectives

The objectives of the AIVC are to:

- enable the production of high quality and influential documents of international status regarding energy efficient ventilation and air infiltration;
- generate strategy and advice on air infiltration and ventilation related issues in new and renovated buildings;
- communicating and disseminating information, including but not limited to conferences and workshops, webinars, databases and a high visibility web presence, in relation to smart ventilation, resilient ventilative cooling, building and ductwork airtightness and indoor environmental quality.

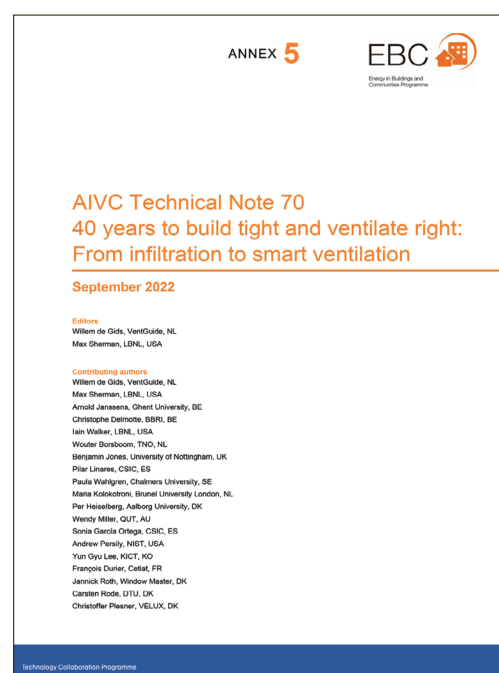
Deliverables

- Events: 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 2022, the AIVC focused its work mainly on thirteen projects, the 41st and 42nd AIVC Annual Conferences (due to the COVID-19 pandemic it was not possible to organize physical events in 2020 and 2021), 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', EBC Annex 80 'Resilient Cooling of Buildings', EBC Annex 86 'Energy Efficient Indoor Air Quality Management in Residential Buildings', and EBC Annex 87 'Personalized Environmental Control Systems'.

The latest AIVC project launched is entitled 'Ventilation and IAQ guidelines in context of high energy prices'. Previously launched projects which were still running in 2022 include: 'Energy Recovery Ventilation', 'Personalized Environmental Control Systems (PECs)', 'Airtightness status at country level', 'Ventilation status



TN 70: 40 years to build tight and ventilate right:
From infiltration to smart ventilation
Source: EBC Annex 5

at country level', 'Ventilation, airtightness and COVID-19', 'Temperature take-back effect in the context of energy efficient ventilation strategies', 'Rationale Behind Ventilation Requirements and Regulations', 'Indoor Air Quality Metrics', 'Competent Tester Schemes for Building Airtightness Testing', 'Air cleaning as alternative for ventilation', 'IAQ and ventilation specifications in garages', and '40 Years of AIVC'.

In 2022, the AIVC released three Technical Notes (TNs): TN 69: 40 years to build tight and ventilate right: History of the AIVC in February; TN 70: 40 years to build tight and ventilate right: From infiltration to smart ventilation and TN 71: Durability of building airtightness in September. Furthermore 3 Ventilation Information Papers (VIPs) were also published: VIP 45.1: Trends in building and ductwork airtightness in Estonia in July; VIP 45.2: Trends in building and ductwork airtightness in Spain in September; and VIP 45.3: Trends in building and ductwork airtightness in the Czech Republic in December. The project 'Rationale Behind Ventilation Requirements and Regulations' is coming to an end, with a Technical Note as the intended outcome.

TN 70: 40 years to build tight and ventilate right: From infiltration to smart ventilation

The AIVC organized 8 webinars over the course of 2022. Four webinars on resilient cooling of buildings (Indicators to Assess Resilience of Cooling in Buildings, Future weather data and heatwaves, Examples of resilient cooling solutions, and Case studies and policy recommendations) in May and September 2022; an industry oriented webinar on EBC Annex 78 'Substituting Ventilation by Gas Phase Air Cleaning', a webinar on 'Dumb buildings with smart users? Linking building performance and human well being', and a webinar on the 'Use of Super Cool Materials for Efficient Building Ventilation and Heat Mitigation' in November 2022; a webinar on 'IEA EBC Annex 87: Energy and Indoor Environmental Quality Performance

of Personalised Environmental Control Systems (PECs)' was also held in December 2022.

To have more interaction with related organizations and a stronger societal impact, AIVC is a founding member of the Indoor Environmental Global Alliance (www.ieq-ga.net). There is also a close collaboration with the TightVent platform (www.tightvent.eu) and the venticool platform (www.venticool.eu).

AIVC is facilitating collaboration between various initiatives. As an example, the Advisory Board of Practitioners, an initiative from EBC Annex 80, AIVC and venticool, launched in March 2021 seeks to establish a format for regular exchange between Annex 80 scientists and practitioners and planners, as well as representatives from relevant industries.

March and September editions of the AIVC newsletter were published in 2022.

Meetings

The AIVC Board organized two board meetings in 2022:

- Athens, Greece in May, 2022
- Rotterdam, Netherlands in October, 2022

Project duration

1979–2026

Operating Agent

Peter Wouters, INIVE EEIG, Belgium

Participating countries

Australia, Belgium, P.R. China, Denmark, France, Greece, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Republic of Korea, Spain, Sweden, UK and USA

Further information and reports

www.iea-ebc.org



www.aivc.org
