



Personalized Environmental Control System (PECS) in Action: Insights from Case Studies

Thursday 5 December 2024

10:30-12:00 (Brussels, BE)

09:30-11:00 (London, UK)

18:30-20:00 (Tokyo, JP)

17:30-19:00 (Singapore, SG)

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Registration is required: A link to join the webinar will be included in the email confirmation

Personal Environmental Control System (PECS) with the functions of heating, cooling, ventilation, lighting and acoustic has advantages of controlling the localized environment at occupant's workstation by their preference instead of conditioning an entire room. This improves personal comfort, health and energy efficiency of the entire heating, ventilation, and air-conditioning (HVAC) system substantially. Personalized ventilation will also provide improved protection against cross contaminations, which are critical in open plan offices and workplaces with close distance. The application is for workplaces with mainly sedentary activity like offices (open plan, banks, control centres, etc.).

As a part of the IEA EBC Annex 87 on Personalized Environmental Control Systems, this webinar presents field applications of PECS with a global perspective and discusses its benefits and limitations in buildings.

This webinar is organised by the IEA-EBC Annex 87 (<https://annex87.iea-ebc.org/>), the Air Infiltration and Ventilation Centre (www.aivc.org) & venticool (<https://venticool.eu/>) and facilitated by INIVE (www.inive.org).

Agenda (CET)

10:30	Welcome & Introduction Bjarne W. Olesen (ICIEE/DTU, Denmark)	11:20	The PECS journey in Singapore – From Field Environmental Chamber studies to Field studies Chandra Sekhar (NUS, Singapore)
10:40	Field experiences with PECS in The Netherlands Marije te Kulve (bba binnenmilieu, the Netherlands)	11:35	Utilization and Evaluation of PECS in a Research Facility Office in Japan Shin-Ichi Tanabe (Waseda University, Japan)
10:55	Performance of Personalized Ventilation installed in Open-Plan Offices Arsen Krikor Melikov (DTU, Denmark)	11:50	Questions and answers
11:10	Questions and answers	12:00	End of the webinar





Air Infiltration and Ventilation Centre

Cost and registration

Participation to the webinar is free but requires you to register for the event. The webinar will be limited to a maximum of 1000 persons. To register, please click on the "Register now" button above.

What is a webinar?

A webinar is a conference broadcasted on internet. To follow a webinar you must have a computer with a sound card and speakers or headphones. Once logged in the "webinar room", you will be able to see the slides of the presentation and to hear the panellists' comments. You will also be able to ask written questions to the speakers, and to answer on-line surveys.

Hardware, software

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About AIVC

Created in 1979, the Air Infiltration and Ventilation Centre (www.aivc.org) is one of the projects/annexes running under the International Energy Agency's Energy in Buildings and Communities (IEA-EBC) Programme. With the support of its member countries as well as key experts and various associations (REHVA, IBPSA, ISIAQ), the AIVC offers industry and research organisations technical support aimed at better understanding the ventilation challenges and optimising energy efficient ventilation.

The AIVC activities are supported by the following countries: Australia, Belgium, China, Denmark, France, Italy, Ireland, Japan, Netherlands, New Zealand, Norway, Republic of Korea, Spain, Sweden, UK and USA.

About IEA EBC Annex 87 - Energy and Indoor Environmental Quality Performance of Personalised Environmental Control Systems

Annex 87 Energy and Indoor Environmental Quality Performance of Personalised Environmental Control Systems (<https://annex87.iea-ebc.org/>) is an international research project of the IEA Energy in Buildings and Communities (EBC) programme. The objective of this project is to establish design criteria and operation guidelines for PECS and to quantify the benefits regarding health, comfort and energy performance. This includes also control concepts and guidelines for operating PECS in spaces with general ambient systems for heating, cooling, ventilation, and lighting. The scope of the project includes all types of PECS for local heating, cooling, ventilation, air cleaning, lighting, and acoustics. It includes desktop systems, which are mounted on desks, or integrated into furniture, chairs with heating / cooling and ventilation, and other types that can be found during the study. It also includes wearables, where heating, cooling, and ventilation are included in garments or devices attached to an occupant's body.

About venticool

The platform for resilient ventilative cooling, venticool (<http://venticool.eu/>) supports better guidance for the appropriate implementation of resilient ventilative cooling strategies as well as adequate credit for such strategies in building regulations. The platform philosophy is to pull resources together and to avoid duplicating efforts to maximise the impact of existing and new initiatives. venticool has been initiated by the International Network for Information on Ventilation and Energy Performance (INIVE) with the financial and/or technical support of the following partners: Agoria, Reyaners Aluminum, Velux and WindowMaster.

About INIVE

INIVE (International Network for Information on Ventilation and Energy Performance) was created in 2001. The main reason for founding INIVE was to set up a worldwide acting network of excellence in knowledge gathering and dissemination. At present, INIVE has as member organisations Buildwise, CETIAT, Ghent University, IBP-Fraunhofer, KU Leuven.

INIVE is coordinating and/or facilitating various international projects, e.g. AIVC (www.aivc.org), TightVent Europe (www.tightvent.eu), venticool (<https://venticool.eu/>) and Dynastee (www.dynastee.info). INIVE has also coordinated the ASIEPI project dealing with the evaluation of the implementation and impact of the EU Energy Performance of Buildings Directive, the QUALICHeCK project aiming towards improved compliance and quality of the works for better performing buildings, BUILD UP the European portal on Energy Efficiency and the EPBD feasibility study 19a.

