

Presentation of AIVC and ventilation related activities

Peter Wouters

Operating Agent AIVC





40 years of AIVC

AIVC in practice

Collaborations



40 years of AIVC

AIVC in practice

Collaborations



Energy in Buildings and
Communities Programme



Air Infiltration and Ventilation Centre

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Recent News



Highlighted News



**AIVC 2019 Conference -
Abstract submission
deadline extended**

New deadline is 7 April, 2019

> 20 March 2019

[MORE](#)



**AIVC Newsletter issue #15
– March 2019 now
available**

New edition!

> 20 March 2019

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**VIP 39: A review of
performance-based
approaches to residential
smart ventilation**

New release!

> 20 March 2019

[MORE](#)



Top events



**15-16 October 2019, Conference, Ghent, 40th AIVC
conference**

The 40th AIVC conference will be held on 15 and 16 October 2019 in Ghent, Belgium. It will also be the 8th TightVent conference and the 6th venticool conference.

[MORE](#)



**27-28 March 2019, Symposium, Dublin, “Quality ventilation is
the key to achieving low energy healthy...”**

Sustainable Energy Authority of Ireland (SEAI) together with the Air Infiltration and Ventilation Centre (AIVC) are organising a symposium entitled “Quality ventilation is the key to achieving low energy healthy...”

[MORE](#)



**24-25 May 2019, Hannover – “11th International BUILD AIR
Symposium”**

The 11th International BUILD AIR Symposium “Airtight Buildings, Thermography and Ventilation Systems in Practice” will be held on May 24-25, 2019 in Hannover Germany.

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Did you know?

What is smart ventilation?

[LEARN MORE](#)



Key Publications



**VIP 39: A review of
performance-based...**

Ventilation Information Paper no39: “A review of performance-based...”

> Gaëlle Guyot, Iain Walker, Max Sherman, Pilar Linares, Sonia García Ortega, Samuel Caillou, EU

[MORE](#)



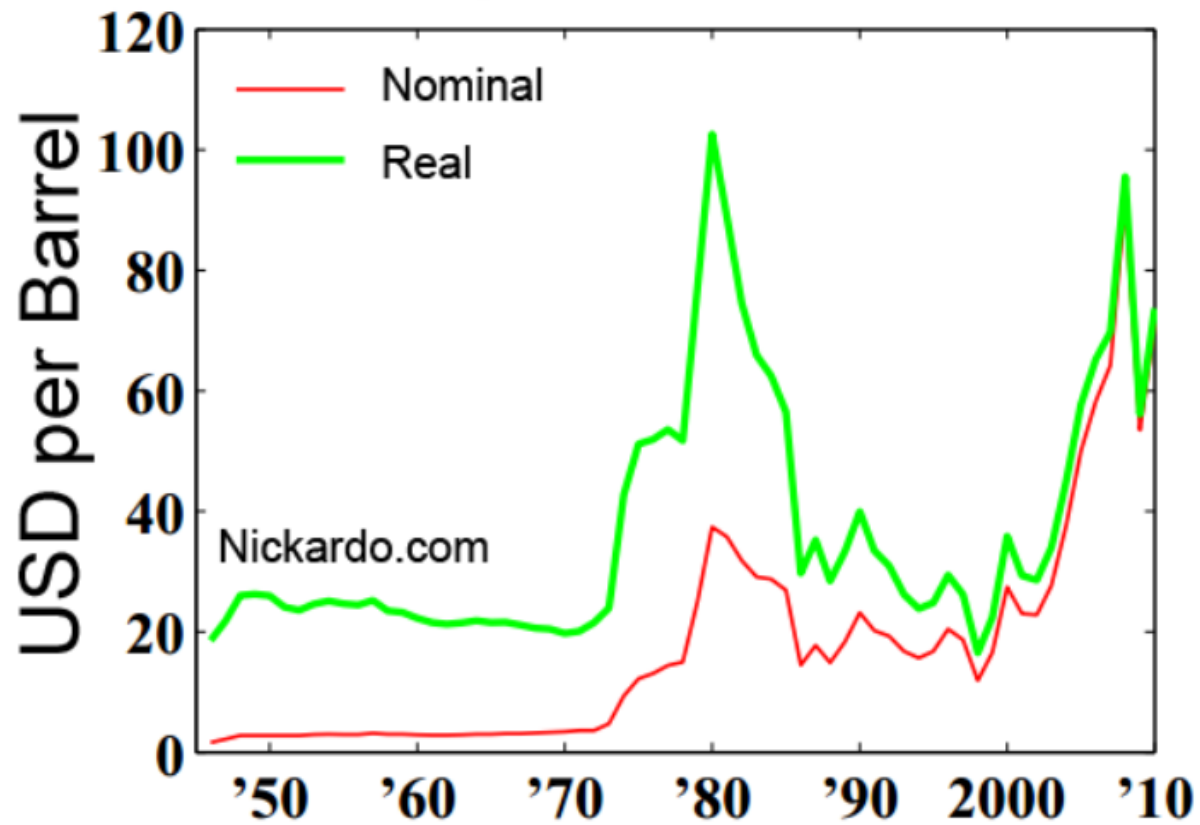
**VIP 38: What is smart
ventilation?**

In March 2017, AIVC identified smart ventilation for buildings as a new and...

> François Durier, Rémi Carrié, Max Sherman, EU



Price of Oil



...1973...

- Most countries: limited interest and almost no knowledge on ventilation, air infiltration and indoor air quality
- Few countries were ahead: SE, CAN, NL, ...
- Start of IEA implementing agreement **ECBCS**: Energy conservation in Buildings and Community Systems

...Eighties...

- **ECBCS AIC (Air Infiltration Centre – Annex 5) running**
 - Annex 1 had indicated that many questions existed regarding air infiltration
- **Policy in several countries: Built tight!**
- **Airtightness was research topic in some countries**
- **IEA annex 8 Occupants' behaviour**
- **IEA Annex 18 Demand Controlled Ventilation**
- **In research and in some countries growing interest for health and comfort**



INTERNATIONAL ENERGY AGENCY
energy conservation in buildings and
community systems programme

Technical Note AIC 10

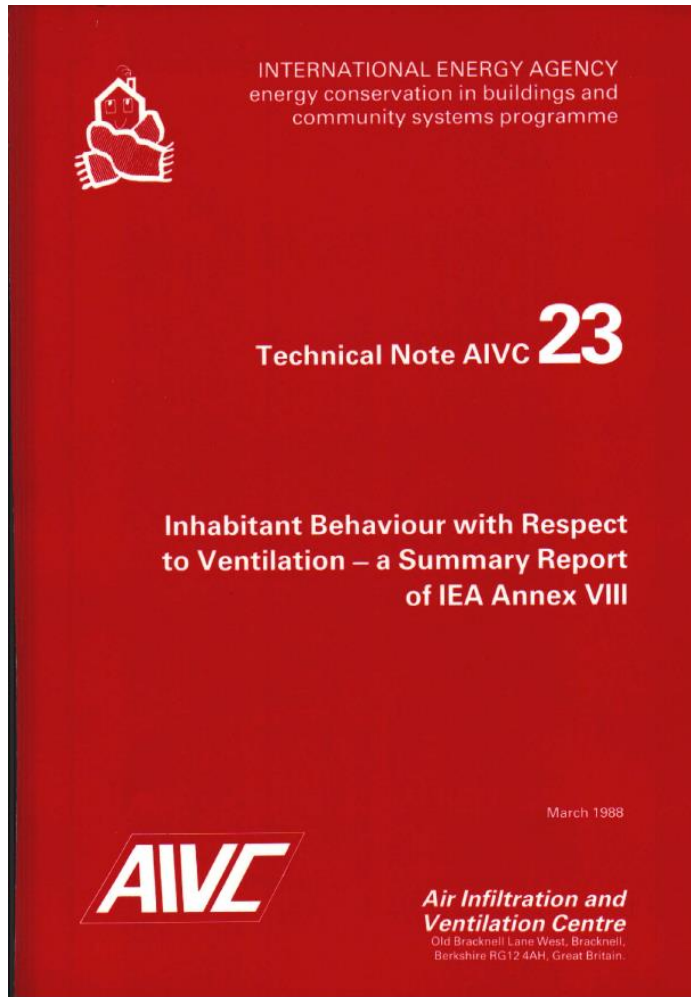
Techniques and instrumentation
for the measurement of
air infiltration in buildings
— a brief review and
annotated bibliography



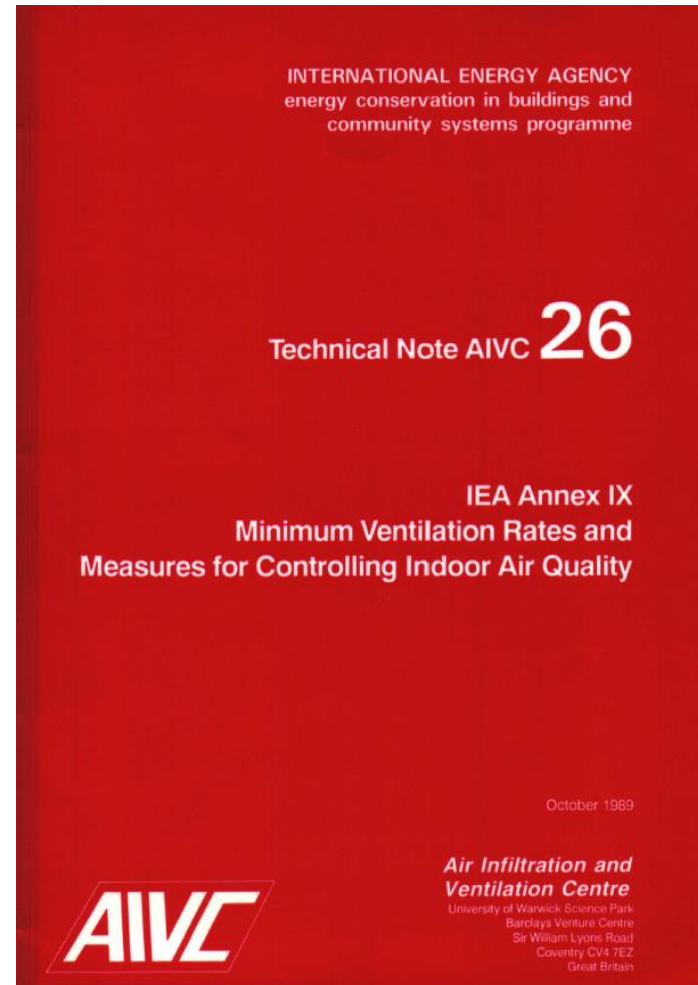
May 1983

Air Infiltration Centre
Old Bradwell Lane West, Bradwell,
Barnet, Great Britain, WC1N 4AA

Annex 8



Annex 9



1986

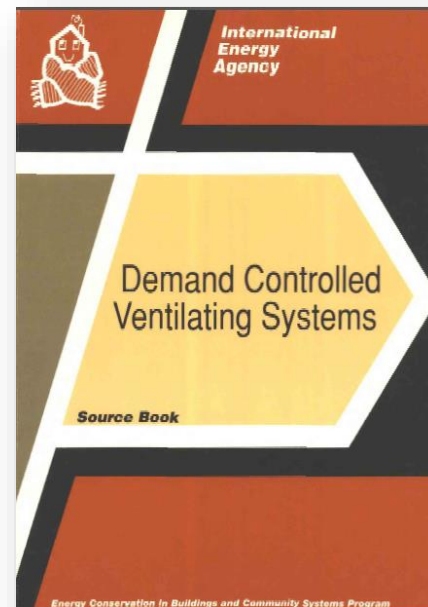
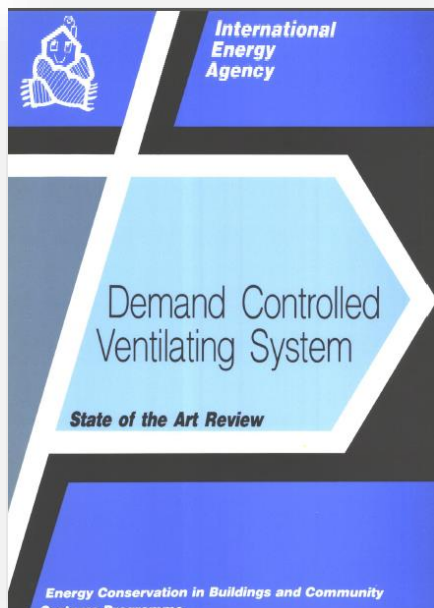
AIC became AIVC

The 'Air Infiltration and Ventilation Centre'



IEA EBC Annex 18

Demand Controlled Ventilation Systems (1987-1992)



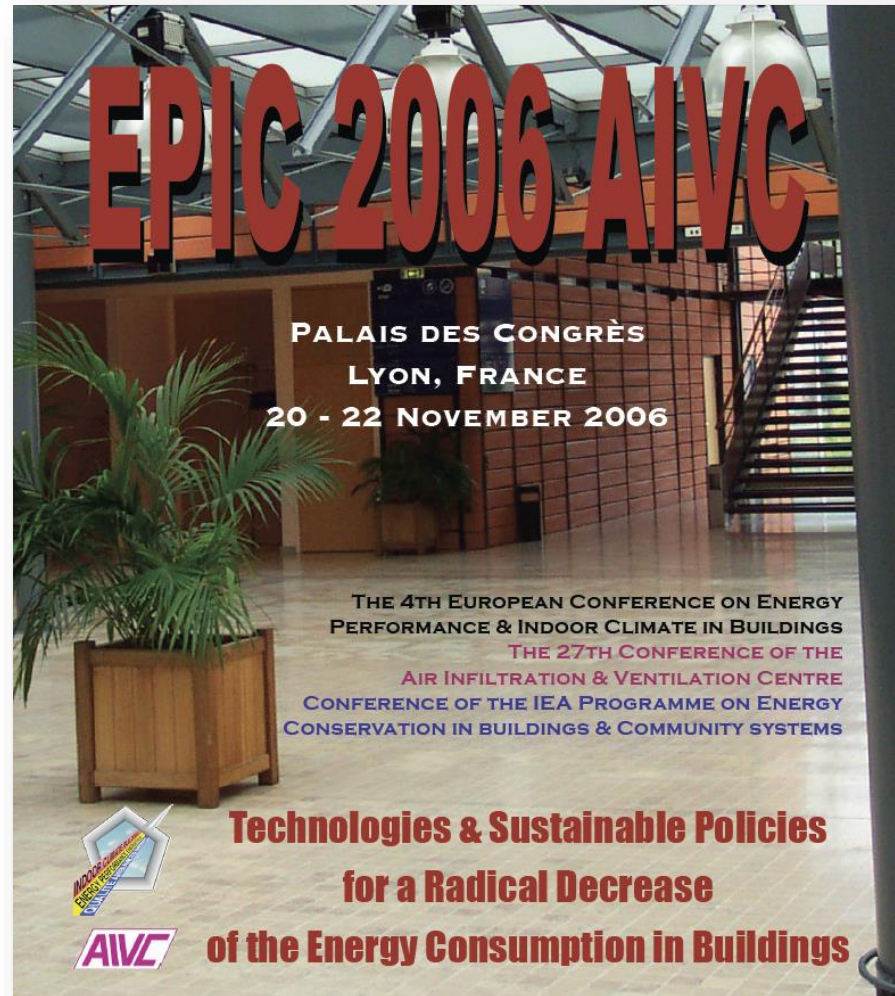
Around 1990...

- European **Pascool** project
... first time focus on summer comfort control...
- European project **NATVENT**
... renewed attention for natural ventilation strategies...
- Annex 35 **Hybvent**
... focus on hybrid ventilation
- **ISIAQ** created in 1992



EPIC conferences in Lyon (1994 – 2006)

Energy Performance and
Indoor Climate





Air Infiltration and Ventilation Centre



EBC

Energy in Buildings and Communities Programme



40 years of AIVC



Highlighted News



Top events

What Calculation Techniques are Available?

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Fin...



#12

now...

New release!

> 08...er 2017

MORE >

AIVC in practice

23 October 2017, international workshop, Brussels,
"Ventilative cooling in buildings: now & in the future"

The current development in building energy efficiency towards nZEB buildings represents a number of new challenges to design and construction.

This ventilation information Paper analyses both the policy instruments used (...
> Valérie Leprince, Maria Kapsalaki



th

Collaborations

used around the...

> Benjamin Jones , United Kingdom

AIVC today...



Australia



Belgium



China



Denmark



France



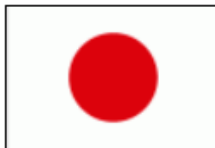
Greece



Ireland



Italy



Japan



Netherlands



New Zealand



Norway



Republic of Korea



Spain



Sweden



United Kingdom



United States of America

AIVC Newsletter



Foreword

Welcome to the March 2018 edition of the AIVC newsletter!

In this newsletter we are very pleased to announce China as new AIVC member country.

As in previous editions, this issue provides an overview of our latest achievements and initiatives i.e. information on past and future events, new publications, feedback on on-going AIVC projects.

Please visit our website, follow us on twitter and LinkedIn and subscribe to our monthly newspaper "Energy Efficiency and Indoor Climate in Buildings" to find out more about our activities.

Also, don't forget to mark your agenda for the following upcoming major events:

- Venticool Webinar "Ventilative cooling and summer comfort: Freevent project in France" on 25 April, 2018 (10:30-12:00 CET).
- IEA-EBC Annex Definition Workshop on "Resilient Cooling for Residential and Small Office Buildings" on 27 April 2018 in Vienna, Austria
- 39th AIVC Conference on September 18-19, 2018 in Juan-les-Pins, France

We wish you a pleasant reading and look forward to seeing you in our future events.



Peter Wouters, Operating Agent AIVC

18 -19 September 2018: 39th AIVC - 7th TightVent & 5th venticool conference in Juan-les-Pins, France

The 39th AIVC- 7th TightVent & 5th venticool conference "Smart ventilation for buildings" will be held on 18 and 19 September 2018 in Juan-les-Pins, France.

The conference will consist of 3 parallel tracks largely devoted to smart ventilation, Indoor Air Quality (IAQ) and health relationships, ventilation & airtightness, ventilative cooling – resilient cooling (click here to see full list of topics). The conference will consist of a mixture of well prepared and structured sessions focused on the conference topics, presentations on invitation, and presentations arising from the call for papers.

The conference is organised by: CETIAT, the French technical centre for the heating, ventilation and air conditioning industries; ADEME, the French environment and energy management agency; and INIVE, the International Network on Ventilation and Energy Performance on behalf of the AIVC, TightVent Europe and venticool;

The abstract submission deadline has been extended to **20 March, 2018**.

Most of the topical sessions are now known. The provisional list of topical sessions is as follows:

Rationale behind ventilation requirements and regulations; Integrating uncertainties due to wind and stack effect in declared airtightness results; Ductwork airtightness: On-going work in some European countries; Smart ventilation control strategies; Sensors for smart ventilation; Utilization of heat recovery; Performances of residential cooker hoods; Indoor Air Quality metrics; French initiatives for indoor air quality; Demand controlled ventilation in French buildings – 35 years of wide scale experience; Commissioning of ventilation systems – Improving the quality of installed ventilation systems; Measurement Accuracy of air flow and pressure difference; Air cleaning as supplement for ventilation; New annex on resilient cooling; BIM and Construction 4.0 opportunities in relation to ventilation and airtightness

For more information and to submit your abstracts, please visit the conference website at: <http://www.aivc2018conference.org>



Foreword

@AIVCnews

We are very pleased to announce that Greece and Ireland have joined as new AIVC member countries. The annual AIVC spring event is taking place in Dublin on March 27 and 28 in conjunction with the AIVC board meeting.

This year is the 40th anniversary of the AIVC and this will be celebrated at the 40th AIVC conference in Ghent (Belgium), which will be held on October 15 and 16. The deadline for submitting abstracts is April 7! Next year, the AIVC conference will take place in Athens on 14-16 September.

Enjoy your reading.

Peter Wouters, Operating Agent AIVC



15 -16 October 2019 – 40th AIVC - 8th TightVent & 6th venticool conference in Ghent, Belgium

In the past 40 years, since the first oil crisis in the seventies, energy and climate goals have been shaping many countries' policy and legislative agendas. The building sector plays a crucial role in achieving these goals, considering the energy use attributed to buildings and its huge potential for improved energy performance.

Whereas in the past most of the focus was on reducing the energy consumption, it is now clear that better performing buildings must ensure an acceptable Indoor Environmental Quality (IEQ), by providing higher Indoor Air Quality (IAQ) and comfort levels for their occupants. Building ventilation entails both challenges and opportunities to achieve this goal.

In 2019 the AIVC completes its 40th year of existence and the conference organisers thought that it would be good to pay a particular interest to the evolution during these 40 years.

This is the context defining the core theme of the joint 40th AIVC, 8th TightVent and 6th venticool Conference as: "From Energy crisis to sustainable indoor climate – 40 years of AIVC". The Conference will be held on 15 and 16 October 2019 at 'Het Pand', the congress centre of Ghent University in Ghent, Belgium.

The conference will consist of 3 parallel sessions largely devoted to:

1. Smart ventilation, Indoor Air Quality (IAQ) and health relationships
2. Airtightness
3. Ventilative cooling – Resilient cooling

The conference programme will include well-prepared and structured sessions focused on the conference topics, invited speakers, long and short oral presentations arising from the call, as well as 90 seconds industry presentations.

Abstract submission is open at: <https://www.dna.gr/aivc2019/>.

The deadline for the abstract submission is **April 7, 2019**.

In the

Foreword
18 -19 Sep
7th TightVent
conference
AIVC-proj
recovery I
systems
27 April 2
Annex De
38th AIVC
Summarie
and airtigi
38th AIVC
paper, be
AIVC Vent
n°38: Whi
Recording
ventilation
China joins the AIVC
NEWSPAPER 'Energy Efficiency and
Indoor Climate in Buildings'
List of AIVC board members



no 15

March 2019

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Foreword

15 -16 October 2019: 40th AIVC - 8th TightVent & 6th venticool conference in Ghent, Belgium

Towards a better integration of indoor air quality and health issues in low-energy houses: Development of a performance-based approach for ventilation

39th AIVC Conference 2018:

Summaries of the ventilative cooling and airtightness tracks

39th AIVC Conference, 2018: Best paper, best poster awards

Highlights of the AIVC 2018

Conference at the REHVA Journal

AIVC Ventilation Information Paper

Ventilation Information Paper n° 38

March 2018

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and Management
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International Energy Agency's
Energy in Buildings and Communities
Programme



Air Infiltration and Ventilation Centre

What is smart ventilation?

François Durier, CETIAT, France
Rémi Carrié, ICEE, France
Max Sherman, LBNL, USA

1 Introduction

In March 2017, AIVC identified smart ventilation for buildings as a new and important topic to be addressed.

Several actions were defined by AIVC Board about this topic in order to exchange and disseminate information on this topic. A working group of AIVC experts from several countries was created. One of its tasks was to agree on a definition of smart ventilation.

The purpose of this paper is to present and illustrate this definition of "smart ventilation".

2 What is smart ventilation?

2.1 Definition

of contaminants, operation of other air moving and air cleaning systems.

In addition, smart ventilation systems can provide information to building owners, occupants, and managers on operational energy consumption and indoor air quality as well as signal when systems need maintenance or repair.

Being responsive to occupancy means that a smart ventilation system can adjust ventilation depending on demand such as reducing ventilation if the building is unoccupied.

Smart ventilation can time-shift ventilation to periods when a) indoor-outdoor temperature differences are smaller (and away from peak outdoor temperatures and humidity), b) when indoor-outdoor temperatures are appropriate

AIVC projects...

Philosophy on airtightness requirements

How tight and insulated ducts should be?

Durability aspects of airtightness

Quality management of airtightness

TAAC (TightVent Airtightness Associations Committee)

Ventilative cooling

Ventilation needs and health

Steps to improve the quality of residential ventilation systems

Residential cooker hoods in low energy buildings

Smart ventilation

AIVC 2018

39th AIVC - 7th TightVent & 5th venticool Conference

Smart ventilation for buildings

18-19 September 2018, Antibes Juan-Les-Pins Conference Centre,
Antibes Juan-Les-Pins, France

88 14 24 41
DAYS HOURS MINUTES SECONDS

AIVC workshops

March 2019	Quality ventilation is the key to achieving low energy healthy buildings (Dublin)
March 2018	Ventilation for Indoor Air Quality and Cooling (Sydney)
March 2018	Towards Higher Performing Homes: The Role of Ventilation and Airtightness (Wellington)
March 2017	Is ventilation the answer to indoor air quality control in buildings?
March 2016	Summer comfort technologies in buildings
March 2015	Ventilation and Airtightness: Voluntary and Regulatory Frameworks to Improve Quality and Compliance (Lund)
March 2014	Quality of Methods for Measuring Ventilation and Air Infiltration in Buildings (Brussels)
April 2013	Airtightness – Design, implementation, control and durability: feedback from practice and perspectives (Washington DC)
March 2013	Ventilative cooling (Brussels)
March 2013	Securing the quality of ventilation systems in residential buildings (Brussels)
May 2012	Ventilation and health (Brussels)
March 2012	Achieving relevant and durable airtightness levels (Brussels)
June 2010	Large scale implementation of airtightness plans (Brussels)
March 2010	Innovation and energy performance (Amsterdam)
September 2009	Impact, compliance and control of energy legislations (Brussels)
March 2009	Summer comfort and cooling (Barcelona)
March 2008	National trends in ventilation markets (Ghent)

[Annual AIVC conferences](#)[AIVC Workshops](#)[AIVC Webinars](#)[Events endorsed by AIVC](#)

Webinar details



25 April 2019, Webinar – Ductwork airtightness measurements: protocols

04/25/2019 - 10:00

Various studies have shown that ductwork leakage has a major impact on energy use (i.e. increased fan energy use, heating & cooling losses etc.). However, in most European countries, it is not common to perform ductwork airtightness tests, which is probably due to the lack of awareness on the consequences of ductwork leakage. As follows, ductwork airtightness is not properly taken into account in most Energy Performance Regulations and Calculations.



40 years of AIVC

AIVC in practice

Collaborations



More focusing on knowledge generation aspects

More focusing on market implementation



BUILDING AND DUCTWORK AIRTIGHTNESS PLATFORM



More focusing on market implementation





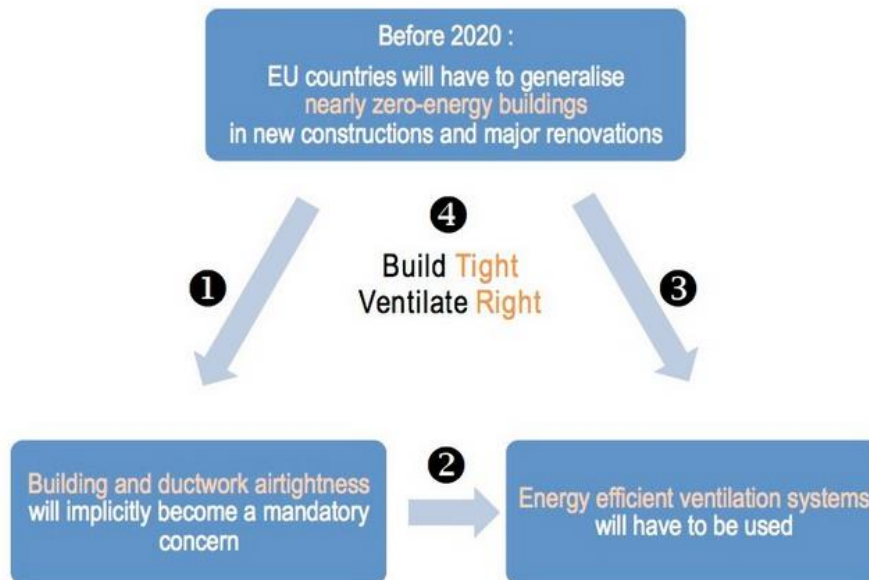
BUILDING AND DUCTWORK AIRTIGHTNESS PLATFORM

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TightVent Airtightness Associations Committee – TAAC

- The participants (TAAC members and guests) are from Belgium, Canada, Croatia, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Ireland, Latvia, Norway, Poland, Spain, Sweden, UK and the US.
- The scope includes various aspects:
 - ▶ airtightness requirements in the countries involved
 - ▶ competent tester schemes in the countries involved
 - ▶ applicable standards and guidelines for testing
 - ▶ collection of relevant guidance and training documents

About TightVent



Reasons behind TightVent Europe

Search Site

Recent News

- BSRIA Topic Guide – Airtightness
- 12-14 September 2016, Conference, Alexandria, VA –37th AIVC – ASHRAE- IAQ joint Conference
- 2nd QUALICHeCK Conference | EPBD Review – Elements for better compliance and quality of works
- New guide released: “How to build a Passivhaus- Rules of thumb”
- Air Leakage Guide. Meeting the air leakage requirements of the 2012 International Energy Conservation Code (IECC)

Categories

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INFORMATION ON EBC ANNEX 62

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Welcome to IEA EBC Annex 62 – Ventilative Cooling!

The Executive Committee of the IEA Energy in Buildings and Communities programme (IEA EBC) approved the IEA EBC Annex 62 on Ventilative Cooling in November 2013. This Annex 62 will

Several sessions at last conferences were dedicated to Annex 62

challenges is the increased need for cooling arising in these highly insulated and airtight buildings, which is not only present in the summer period but also in the shoulder seasons and in offices even in midwinter during periods of occupation. In order to address these cooling challenges of buildings, the research focus of the annex will be on development of design methods and compliance tools related to predicting, evaluating and eliminating the cooling need and the risk of overheating in buildings as well as on the development of new attractive energy efficient ventilative cooling solutions.



Recent updates

- 38th AIVC – 6th TightVent – 4th venticool joint conference – Final programme released
- Register now for the ventilative cooling workshop on October 23, 2017
- Keynote speakers/topical sessions/list of accepted papers at the 38th AIVC – 6th TightVent – 4th venticool joint conference
- New release: Energy Efficiency and Indoor Climate in Buildings
- venticool newsletter June 2017, now available!
- SAVE THE DATE for the

Newsletters



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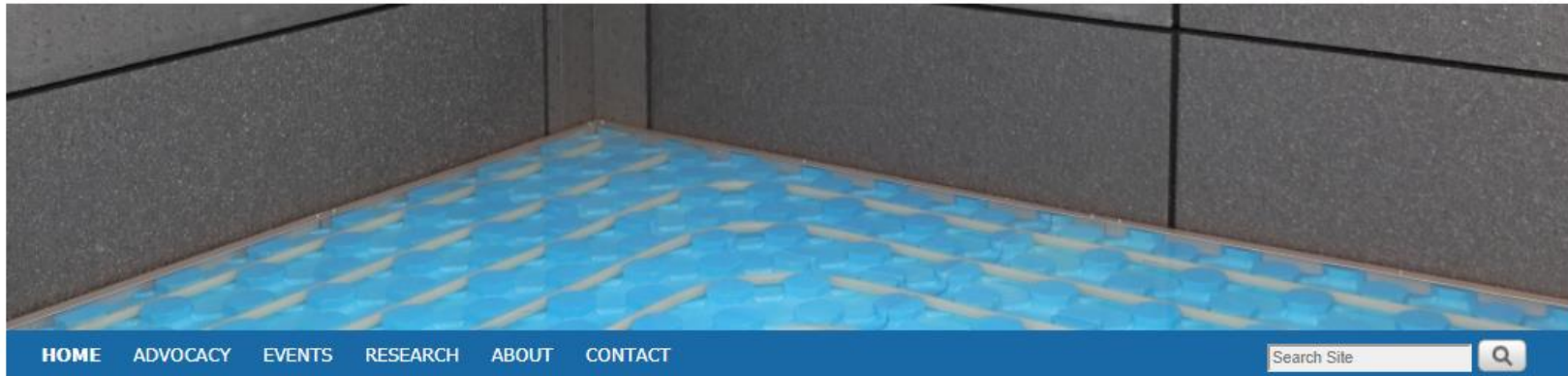
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IEQ Global Alliance

For better indoor environment quality



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Mission of the IEQ Global Alliance

The mission of IEQ-GA is to provide an acceptable indoor environmental quality (thermal environment-indoor air quality-lighting-acoustic) to occupants in buildings and places of work around the world and to make sure the knowledge from research on IEQ get to be implemented in practice. >> [Read more...](#)

★ Call for abstracts for the 40th AIVC Conference 15-16 October 2019, Ghent



The 40th AIVC Conference "From Energy crisis to sustainable indoor climate – 40 years of AIVC" will be held during the 15th & 16th of October, 2019 at 'Het Pand', the congress centre of Ghent University in Ghent, Belgium. It will be a joint event combined with the 8th TightVent and the 6th venticool conferences. The conference programme will include well-prepared and structured sessions focused on the [conference topics](#), invited speakers, long and short oral presentations arising from the call, as well as 90 seconds industry presentations.

Abstract submission is open at: <https://www.dna.gr/aivc2019/> .



June 25 2018
1st European conference
‘BIM and energy performance of buildings’
Brussels –Belgium



Energy Efficiency and Indoor Climate in Buildings

... with specific information on AIVC, IEQ-GA and the platforms QUALICHECK, Dynastee, venticool and TightVent

HEADLINES

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AIVC 2019 Conference-Call for Abstracts

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www.aivc.org - The 40th AIVC Conference "From Energy crisis to sustainable indoor climate - 40 years of AIVC" will be held during the 15th & 16th of October, 2019 at 'Het Pand', the congress centre of Ghent University...

Final Preparation Meeting of IEA EBC Annex 80: Resilient Cooling for Residential and Small Non-Residential Building, 12-13 April, 2019, Dubai

Shared by
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venticool.eu - The final meeting of the Annex 80 preparation phase will be held on April 12-13, 2019 at the Heriot Watt University in Dubai right after the "Comfort at the Extremes" Conference (<https://comfortatthe...>)

24-25 May 2019, Hannover – "11th International BUILDAIR Symposium"

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tightvent.eu - TightVent Europe is pleased to announce the eleventh anniversary of the International BUILDAIR Symposium "Airtight Buildings, Thermography and Ventilation Systems in Residential Buildings" to be held on May 24-25, 2019 in Hannover, Germany.

Quality ventilation is the key to achieving low energy healthy buildings

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www.eventbrite.ie - Dodder A, First Floor, RDS, Dublin 4 Researchers, Ventilation Professionals, Consulting Engineers, Architects, Specifiers, low energy building service providers Please note that there is a €100 refund...

"Technical day: Activities of IEA TCP on Energy in Buildings and Communities (EBC TCP)"

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www.aivc.org - The symposium "Activities of IEA TCP on Energy in Buildings and Communities (EBC TCP)" will take place on the 11th of June

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INIVE EEIG – International Network for Information on Ventilation and Energy Performance



Editor's note

Dear Reader,

With this monthly information paper on energy efficiency and indoor climate, we hope to keep you informed about new interesting information on the internet.

In addition, we provide information related to several specific areas of interest:

- Activities with a link to the **Air Infiltration and**

International collaboration
International events

...



Lessons Learned
recognize mistakes
observe what works
document them
share them

ISSN 1307-3729



Federation of
European Heating,
Ventilation and
Air Conditioning
Associations

The **REHVA** European HVAC Journal

Volume: 56 Issue: 1 February 2019 www.rehva.eu

Highlights of the AIVC 2018 Conference:

**Are low-cost sensors good enough
for IAQ controls?**

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**Including air-exchange
performance in building regulation**

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**IAQ in workplace in Belgium:
alternatives to CO₂ requirement**

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Key findings on Ventilative Cooling

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40th AIVC - 8th TightVent & 6th venticool Conference

From energy crisis to
sustainable indoor climate
40 years of AIVC

15-16
October
2019

Ghent,
Belgium

Important Dates

Authors who only want a review
of their abstract:

(New) Abstracts
Submission due

April 7
2019

(New) Abstracts
Acceptance
Confirmation due

May 8
2019

Papers'
Submission due

July 1
2019

Call for
Abstracts
& Papers

www.aivc2019conference.org

