

2018

REHVA ANNUAL REPORT 2018

From REHVA board of directors

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REHVA MEMBERS



Our members in 2018 were:

ABOK, Russia
AHGWTEL/LATVAC, Latvia
AiCARR, Italy
AICVF, France
AIIR, AGFR and AFCR, Romania
AIIRM, Moldavia
ATECYR, Spain
ATIC, Belgium
CIBSE, United Kingdom
DANVAK, Denmark
EKVY, Estonia
ÉTÉ and MMK, Hungary
FINVAC, Finland
HKIS, Croatia
KGH, Serbia
LITES, Lithuania
NORVAC, Norway
ORDEM DOS ENGENHEIROS, Portugal
PZITS, Poland
SITHOK, Slovenia
SSTP, Slovakia
STP, Czech Republic
SWEDVAC, Sweden
SWKI, Switzerland
TTMD, Turkey
TVVL, the Netherlands
VDI, Germany

The membership fee was 2,850 € in 2018.

A detailed list of the members and their logos is in [Annex 1](#).

REHVA SUPPORTERS



Our supporters in 2018 were:

Aermec, Italy
amca international, USA
Baltimore Aircoil International, Belgium
Belimo Automation, Switzerland
C.I.A.T., France
Camfil, Sweden
Daikin Europe, Belgium
Dosetimpex, Romania
Eneko, Turkey
EPEE, Belgium
ES-SO, Belgium
Eurovent Certita Certification, France
Evapco Europe, Italy
Fläktgroup, Sweden
Friterm, Turkey
Granlund, Finland
Halton, Finland
LG Electronics, France
Lindab, Sweden
Rettig, The Netherlands
Rhoss, Italy
Royal Haskoning DHV, The Netherlands
Skanska Commercial Development Nordic, Sweden
Smay, Poland
Smits van Burgst consulting engineers, The Netherlands
Swegon, Sweden
Systemair, Sweden
Uponor Corporation, Finland
Velux, Denmark - **New**
Waldhauser+Hermann, Switzerland

FläktGroup formed 2016 – DencoHappel and Fläkt Woods join forces.

The fee paid by the supporters was 3 000 € in 2018.

A detailed list of the supporters with their activities and logos is in [Annex 2](#).

The REHVA Annual report year 2018 was approved by the REHVA board of directors on 25 March 2019.

The year 2018 was the 55th year since the founding of REHVA.

REHVA BOARD OF DIRECTORS

REHVA board members after the General Assembly 2018 in Brussels were the following:



STEFANO P. CORGNATI
President
AiCARR, Italy
2011 – 2019



FRANK HOVORKA
Treasurer and President elect
AICVF, France
2013 – 2019



ATZE BOERSTRA
Vice-President
TVVL, the Netherlands
2016 – 2019



CATALIN LUNGU
Vice-President
AIR, Romania
2017 – 2020



MANUEL GAMEIRO DA SILVA
Vice-President
Ordem dos Engenheiros,
Portugal
2013 – 2019



JAREK KURNITSKI
Vice-President
EKVY, Estonia
2012 – 2019



MILOS LAIN
Vice-President
STP, Czech Republic
2016 – 2019

PUBLICATIONS

Guidebooks

During 2018, three new guidebooks were published. These are:

Fire Safety in Buildings—Smoke Management Guidelines (Guidebook No.24) by Othmar Brändli (Ed.), Rainer Will (Co-Ed.), Thomas Winkler, Bernd Konrath, Jörg Reintsema, Frank Lucka, Paul White, Grzegorz Sypek, Valery V. Kholshchevnikov, Dmitry Samoshin.

REHVA published a new guidebook on fire safety with valuable contribution of Belimo. The REHVA Guidebook No. 24 Fire safety in buildings-smoke management guidelines describes the different principles of smoke prevention and their practical implementation by way of natural and mechanical smoke extraction systems, smoke control by pressurization systems and appropriate partition measures. This smoke management Guidebook provides the reader with suitable tools, also through references to standards and regulations, for evaluating, selecting, and implementing a smoke control concept that is commensurate with the protection objective.

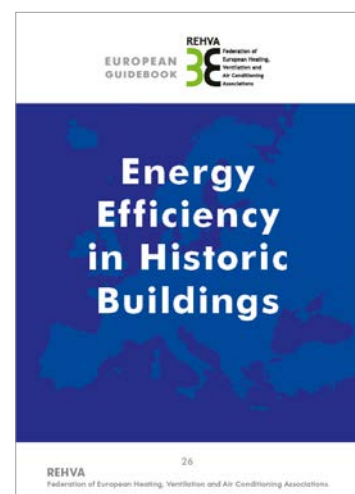
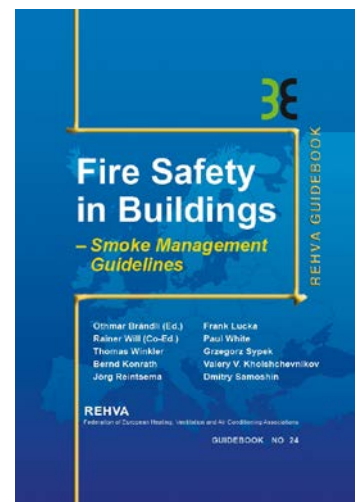
Residential Heat Recovery Ventilation (Guidebook No.25) By Jarek Kurnitski (Ed.), Martin Thalfeldt, Harry van Weele, Macit Toksoy, Thomas Carlsson, Petra Vladykova Bednarova, Olli Seppanen.

Heat recovery ventilation is expected to be a major ventilation solution while energy performance of buildings is improved in Europe. This European guidebook prepared by REHVA and EUROVENT experts includes the latest ventilation technology and knowledge about the ventilation system performance, intended to be used by HVAC designers, consultants, contractors and other practitioners. The authors of this guidebook have tried to include all information and calculation bases needed to design, size, install, commission and maintain heat recovery ventilation properly.

Energy Efficiency in Historical Buildings (Guidebook No.26) By Francesca R. d'Ambrosio Alfano (Ed.), Livio Mazzarella (Ed.).

These guidelines provide information to evaluate and improve the energy performance of historic buildings, fully respecting their significance as well as their cultural heritage and aesthetic qualities. The guidelines are intended for both design engineers and governmental agencies. They provide design engineers with a tool for energy auditing the historic building and offer a framework for the design of possible energy updates, which are conceptually similar to those provided for non-protected buildings, but appropriately tailored to the needs and peculiarities of cultural heritage.

The Publishing and Marketing Committee and the Technology and Research Committee decided to update the REHVA guidebooks' cover page in 2017. The new cover is applied from the guidebook No.25. The stock of guidebooks is stored in the REHVA office in Brussels.



Translations

During 2018, the guidebook “Fire Safety in Buildings—Smoke Management Guidelines” (Guidebook No.24) has been translated in Polish.

A copy of all translated REHVA guidebooks in different languages is stored in the REHVA office in Brussels.

Sales of guidebooks

The price of the hard copies varies according to the year of publication and the number of copies in the stock between 20€ and 50€. Some of them are out of stock.

The price for the guidebooks sold in digital version varies also from 20€ to 50€. They are all available for purchasing. The guidebooks are sold via the [e-Shop](#) on the website.

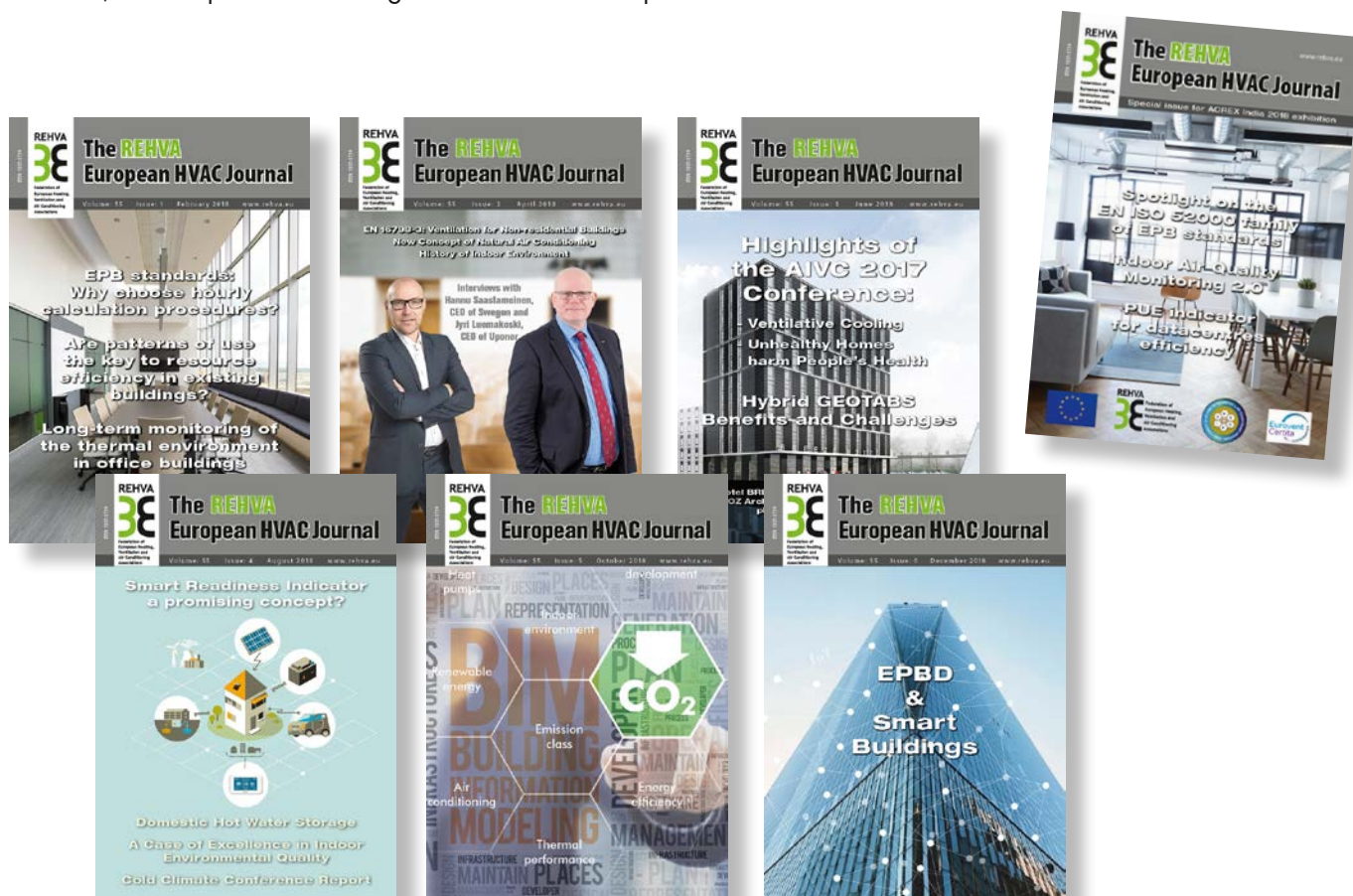
823 guidebooks (hardcopies and PDF versions) were sold during the year 2018.

REHVA European HVAC Journal

Published journals

In 2018, the REHVA European HVAC Journal was published bi-monthly. The journal is still printed and published in Turkey by the Teknik Sektor Yayincilik company.

In 2018, REHVA published six regular issues and one special issue for ACIREX 2018.



The current subscribers were offered for the cost of 60€ per year for members of REHVA Members or 70€ per year for others the following services:

- The REHVA Journal hard copy
- The unlimited access to the restricted area that includes:
 - o 12 REHVA eGuidebooks
 - o CLIMA2016 Courses and Workshops full videos
 - o Tailored EU Policy tracking
 - o Latest updates on EPBD standards

Each issue of the REHVA Journal is also available for free as digital version. Individual technical papers are available online as HTML or downloadable in PDF format, the entire journal issue is also downloadable as PDF document. The REHVA website is optimised for search engines, so the individual articles are easier to find online. Jarkko Narvanne, the Graphical Designer, provides the HTML and PDF versions. REHVA office uploads the technical papers of each issue on the REHVA website and promotes each new issue in a special newsletter and finally shares each technical paper on all REHVA social media (LinkedIn, Facebook). The digital versions of the REHVA Journal are available on the REHVA [website](#).

REHVA Member Associations continued to receive 2 free copies of each issue of the REHVA Journal, while the REHVA Supporters received 1 free copy.

Publishing information

In 2018, the REHVA Journal was distributed at several fairs and conferences to promote REHVA and European HVAC technology. The events were selected by the potential visibility and relevance of participants. The Journal has been an important asset to attract exhibitions to cooperate with REHVA. About 6,710 printed copies of REHVA journals were distributed at 12 events.

Issue	Theme	Events where the Journal was distributed
1/February	EPB standards: Why choose hourly calculation procedures? Are patterns of use the key to resource efficiency in existing buildings? Long-term monitoring of the thermal environment in office buildings.	<ul style="list-style-type: none"> - WSED, Wels, Austria, 28 February – 2 March 2018 - Cold Climate HVAC Conference, Kiruna, Sweden, 12 – 15 March 2018 - MOSTRA CONVEGNO, Milan, Italy, 13 – 16 March 2018 - Light and Building 2018, Frankfurt, Germany, 18 – 23 March 2018
ACREX	Special issue for ACREX exhibition: European HVACR Technologies	<ul style="list-style-type: none"> - ACREX, Bangalore International Exhibition Centre, India, 22– 24 February 2018
2/April	EN 16798-3: Ventilation for Non-residential buildings New concept of natural air conditioning History of Indoor Environment	<ul style="list-style-type: none"> - REHVA Annual Meeting, Brussels, Belgium, 21 – 23 April 2018 - Roomvent & Ventilation 2018, Espoo, Finland, 2– 5 June 2018
3/ June	Highlights of the AIVC 2017 Conference Hybrid GEOTABS-benefits and challenges	<ul style="list-style-type: none"> - EUSEW 2018 – EU Sustainable Energy Week, June 2018 - ASHRAE Annual Conference 2018, Houston, TX, USA, 23 – 27 June 2018
4/August	SRI a promising concept? Cold Climate Conference report A case of Excellence in indoor environmental quality	<ul style="list-style-type: none"> - FinnBuild 2018 fair, Helsinki, Finland, 10 – 12 October 2018 - Chillventa, Nuremberg, Germany, 16 – 18 October 2018
5/October	NZEB and CO ₂ footprint	<ul style="list-style-type: none"> - REHVA Brussels Summit conference, 13 November 2018
6/December	EPBD & Smart Buildings	

REHVA Journal Editorial Board 2018

Francis Allard, France

Ahmet Arisoy, Turkey

Marianna Brodach, Russia

Vincenc Butala, Slovenia

Francesca R. d'Ambrosio, Italy

Ioan Silviu Dobosi, Romania

Andy Ford, United Kingdom

Karel Kabele, Czech Republic

Jarek Kurnitski, Estonia

Livio Mazzearella, Italy

Renato Merati, Italy

Natasa Nord, Norway

Branimir Pavkovic, Croatia

Dusan Petras, Slovakia

Olli Seppänen, Finland

Branislav Todorovic, Serbia

Peter Wouters, Belgium

REHVA Journal Staff

Jaap Hogeling, Editor-in-chief

Rebeka Maršnjak, Editorial Assistant

Jarkko Narvanne, Graphical Designer

E-Newsletters

Six electronic newsletters were published every two months in 2018. This newsletter is distributed electronically to a list of 2,874 subscribers. They are also [downloadable](#) from the REHVA website. This newsletter provides information about REHVA community news, upcoming HVAC events, publications, news about European projects, European policy developments and other relevant information for the building services field. Free subscription to the newsletter is available [online](#).

Supporter's Bulletin

Six Supporter's Bulletin, dedicated to REHVA supporters, were published in 2018. The Supporters' Bulletin is sent bi-monthly to all REHVA supporters. Anita Derjanecz, the Editor of the Bulletin, took care of the content that gives useful information to our supporters and is focused on European policies related to HVAC products, as well as EU project news. The bulletin also informs about REHVA activities. They are [downloadable](#) from the REHVA website.



REHVA DICTIONARY

The REHVA Dictionary is available in the [REHVA website](#) as a free service containing technical words and terms used in the building services. The REHVA Dictionary offers a unique tool for HVAC professionals. REHVA has been developing the Dictionary in the past 15 years adding new terms. The REHVA Dictionary is a translation tool, which enables to search and translate a word or term simultaneously in 20 languages. The dictionary search lists all related expressions and word combinations of the searched term.



Since 2017, REHVA has been transferring the popular online dictionary also into a user-friendly App for tablets and smart phones, downloadable on [App Store](#) and [Google Play](#). In 2018, new terms on building automation were added to the Dictionary App in Turkish and Russian.

At the last COP meeting during the Brussels Summit in November 2018, the Committee confirmed the upgrade of the Dictionary App with new features. The upgrade includes new content items, such as interactive summary table of the new EPBD standards, links to the REHVA Members Association websites and a metrics converter. PMC Committee also confirmed this new upgrade, together with the search engine optimization to increase app visibility by the major search engines.

WEBSITE AND SOCIAL MEDIA



In 2018, REHVA further improved its website in terms of layout for better user experience and navigation, the eShop, and the layout of the restricted area.

The annual subscription fee to the restricted area was 30€ for REHVA Members (all members of REHVA Member Associations) and 40€ for non-members.

The restricted area contains the following sections:

- 17 REHVA e-Guidebooks
- CLIMA 2016 Courses and Workshops full videos
- Tailored EU Policy tracking
- Latest updates on EPBD standards
- HVAC Terminology
- REHVA Committees documents

To boost REHVA website visits in 2018, we have launched a social media campaign to attract a wider range of visitors and to regularly inform our audience about our services and share REHVA knowledge. The estimated number of visitors slightly decreased by 1,12 % from 2017 until 2018 (111 553 unique visitors in 2017 against 101 088 in 2018). One of the reasons is the limited availability and low speed of the website due to the outdated version of the content management software the website is built with. This resulted in increased maintenance works and decreased quality for website visitors in the last quarter of 2018. Therefore, during the Brussels Summit in November 2018, the PMC decided to revamp the REHVA website that will result in a massive improvement of the website performances, enable easier content management, increase visibility by search engine optimisation and improved responsiveness on smart phones and tablets.

The latest news, activities, and industry highlights are shared on the REHVA social media channels on Twitter, Facebook, LinkedIn and YouTube. The REHVA Social Media accounts, such as [LinkedIn](#) REHVA Page and [Group](#),

as well as [Facebook](#) and [Twitter](#) increased the REHVA potential regarding knowledge spreading and promotion. REHVA counts a total of 4992 followers & members in all social media channels that is continuously increasing. REHVA also links the social media groups of its EU projects to the REHVA channels to generate synergies. On the [Flickr](#) account we share event photos, while on [YouTube](#) we share videos about REHVA activities and events, and it is available as a promotional channel also for our supporters companies.

EXTERNAL RELATIONS ACTIVITIES

The External Relations Committee oversees the REHVA public affairs strategy and the activities to liaise with stakeholders and professional organisations in Europe and globally. The external relation activities of REHVA have 3 main priorities:

1. **EU public affairs:** liaising with the EU institutions and the services of the European Commission. REHVA is advocating for indoor environment quality and buildings energy efficiency and aims at influencing the development of buildings related EU policies and at supporting their national level implementation in the field of HVAC.
2. **Networking and co-operation with EU level professional organisations** and bodies in the construction sector that are active in the field of buildings energy efficiency, indoor environment quality and sustainable energy: federations of architects, consulting engineers, contractors, HVAC manufacturers, facility managers, construction industry, as well as EU level technology platforms and initiatives. The objectives of REHVA in this field are the professional networking and the joint representation of interest at EU level as well as the knowledge exchange and the promotion and dissemination of innovation and knowledge in the sector.
3. **Co-operation with HVAC association outside Europe** that have a similar mission like REHVA: ABRAVA (Brazil), ASHRAE (United States), CCHVAC (China), ISHRAE (India), SAREK (Korea) and SHASE (Japan) based on a memorandum of understanding (MoU). During the REHVA Annual meeting 2018, a new MoU was signed between Korean Institute of Architectural Sustainable Environment and Building Systems (KIAEBS) and REHVA. REHVA aims at exchanging knowledge and at promoting European HVAC technologies, standards and knowledge at international level.

EU institutions and EU public affairs

REHVA keeps liaison with the European Union Institutions: European Commission Services, such as DG Energy, DG Enterprise, DG Environment, DG Research, and the Commissions' Executive Agencies EASME and INEA, as well as with the European Parliament's ITRE and ENVI Committees, and the Council of the EU. REHVA is acknowledged by DG Energy and DG Research as a European stakeholder organisation and regularly receives invitations to policy consultations and stakeholder meetings, as well as information about on-going policy making work. REHVA is registered in the EU Transparency Register and has access to the relevant Committee Meetings (ITRE, ENVI) of the European Parliament.

REHVA focused on the following main policy issues in 2018:

- | | |
|---|---|
| 1) EPBD review and implementation with special focus on: | 3) EU energy research roadmap (SET Plan, Horizon 2020, joint research initiatives, technology platforms) |
| a) Revised EPBD | |
| b) EPBD guidance documents | 4) Ecodesign and Energy labelling updates (including the EPREL database implementation) |
| c) Promotion and dissemination of the new EPB standards | |
| d) Smart Readiness Indicator | 5) Circular Economy |
| 2) Energy Union and the Clean Energy package (including the review of the EED, RED II, Governance of the energy Union) | 6) F-gas regulation implementation |

The most important policy dossier in 2018 was the final revision process of the EPBD. REHVA Technology and Research Committee experts developed important inputs for EPBD guidance documents and attended the



REDay2018 hosted by MEP Bent Bendtsen (in the middle) in the European Parliament



REHVA - EPB Center booth at EUSEW2018



Pau Garcia Audi, DG Energy on the revised EPBD, REHVA Brussels Summit 2018

stakeholder meetings organised by the EC on the Smart Readiness Indicator. A detailed description of the EU policy and advocacy activities follows in the chapter *Technology and Research activities*.

REHVA was represented at high-level policy events related to the European energy and climate policy in Brussels, such as the Green Energy Week (22-24 March 2018), the European Sustainable energy Week (5-7 June 2018) and the high-level conference on [EU's Vision for a clean, modern economy](#) (10-11 July 2018) or the [Renovate Europe Day 2018](#), hosted by MEP **Bendt Bendtsen** (MEP, EPP group) in the European Parliament on 9 October 2018.

REHVA and the EPB Center shared a well-visited booth on the 7th of June in the EUSEW Networking Village. REHVA promoted its Guidebooks, the REHVA Journal and its knowledge dissemination services for building professionals, while the EPB Center presented its support services offered for national regulatory bodies and building professionals. The booth was dedicated to the theme of "Developing innovative heating, ventilation and air-conditioning technology". REHVA showcased the EU projects QUANTUM, HybridGEOTABS and ALDREN with a combination of audio-visual tools and demonstration materials. Booth visitors also had a chance to get latest updates on the EPB standards from senior expert **Dick Van Dijk**.

REHVA organised several seminars and events about the revised EPBD covering the key policy trends with special focus digitalisation and ICT in the HVAC sector, the role of BAC technologies, inspection, digital technical monitoring in the revised EPBD. The 2018 edition of the REHVA Brussels Summit continued to increase REHVA's visibility at EU level attracting many Brussels based stakeholders and sister organisations. The conference on "Smart buildings for smart users- implementing the new EPBD" hosted around 100 participants, with speakers from the European Commission presenting the inspection and digitalisation related aspects of the revised EPBD, as well as the Smart Readiness Indicator, completed by presentations on smart energy systems by the IEA Annex 67, about smart buildings by the REHVA Task Force chair, Ivo Martinac and on digital performance testing by REHVA experts and the QUANTUM project. REHVA supporters Daikin and Rhoss presented the latest market updates from the ventilation and heat pump sectors.

REHVA regularly reported about these events in the REHVA Journal and in its newsletters.

Co-operation with EU level professional organisations

Eurovent Association: REHVA signed a Memorandum of Understanding (MoU) with Eurovent Association on 28 May 2015 that serves as basis of co-operation. In 2018, REHVA organised a well-attended seminar in co-operation and with ATECYR at the Eurovent Summit organised in Sevilla on 25 September 2018 with the title HVAC facilities in Nearly Zero Energy Buildings. (see details in the REHVA seminars section). Eurovent Association representatives attended the REHVA Brussels Summit Conference, the REHVA TRC and Supporters Committee meetings in Brussels on 12-13 November 2018. The MoU between the two associations will be renewed in 2019.



EPB Center: REHVA has decided to become shareholder in the EPB Center founded by ISSO in 2017 to follow the shared objective of supporting the adaptation and proper use of the new set of EPB standards. The aim of the EPB Center is to disseminate, promote, and provide guidance on the application of EPB standards. REHVA is committed to play a key role by disseminating support tools, guidance documents, educational units for courses and webinars to help professionals applying the standards and connected tools. Due to the necessary administrative procedures and changes within REHVA (among others, the changed of by-laws by the REHVA GA in 2018), the actual share acquisition procedure started end of 2018 and will be probably completed in 2019.



In 2018, the EPB Center in co-operation with REHVA and other partners won a 3-years tender from DG Energy to launch its activities and develop the EPB Center's services to Member States, National Standardization Bodies and professionals. REHVA promoted the EPB Center at events and in its publications and attended the kick-off meeting with DG Energy as part of the consortium on 22 September 2018. The work was promoted during the REHVA November Summit in 2018 (see more details in the section about EU projects and tenders). Beside this EPB Center, REHVA and seven REHVA Member Associations submitted a Horizon2020 proposal with a broader aim to help the implementation of the revised EPBD and move towards a new generation of EPCs.

European Construction Technology Platform (ECTP): REHVA is member of the European Construction Technology Platform since 2013. ECTP is involved in the definition of the EU research agenda (SET Plan) influencing Horizon 2020 call topics. REHVA attended the General Assemblies and committee meetings organised by ECTP in 2018 to get information about the upcoming research topics in the field.



EU level industry associations and initiatives: REHVA kept liaison with the Brussels based EU level professional associations in the field of HVAC and building energy efficiency, health and IEQ. We exchanged views and participated at several meetings and events about the revised EPBD, and other energy and climate policies - among others - with **EVIA, EPEE, EHPA, eu.bac, EHI, EFA, Eurovent Association** and **EuroACE**.

A summary of major activities in 2018 is summarised below:

EuroACE and the Renovate Europe campaign. REHVA is following the activities of [EuroACE](#) and the Renovate Europe Campaign run by the organisation. REHVA attended and reported about the annual Renovate Europe Day in 2019. These 1-day congresses became a meeting point with EU policy makers and EU level stakeholders in Brussels. EuroACE published a practical guide on the revised EPBD and organised a webinar series on the Build Up platform about the main chapters. The REHVA Managing Director, Anita Derjanecz, was invited as speaker in the [webinar on Smart and Technology Equipped Buildings](#) – new features from the amended EPBD.



European Copper Institute (ECI). In 2018, REHVA launched a joint webinar series in co-operation with the European Copper Institute and eu.bac under the name [BACS Academy](#) using the well-known Leonardo Energy platform of the ECI. The aim is among others to introduce and promote the joint REHVA guidebook on Building Automation and Control (GB No. 22). REHVA organised one webinar session [Building Commissioning, Ongoing Commissioning and Quality Management](#) on 3 December 2018.



Buildings2030. REHVA started co-operation with a new advocacy organisation, [Buildings2030](#) in 2017. The company aims to raise awareness and advocate the health and well-being related aspects in buildings. REHVA attended meeting with the interest group and considered organising joint advocacy actions and elaborate a study on the non-energy related benefits on high IEQ. Buildings2030 commissioned a new study by BPIE about the non-energy related benefits of high building performance and IEQ levels that was launched in an event hosted by EuroACE on 29 November 2018.



Fire Safe Europe. The [Fire Safe Europe](#) (FSE) association reached out to REHVA to initiate a co-operation in the field of fire safety in buildings. Representatives of the association gave a brief introduction during the REHVA Brussels Summit at the TRC and SC meetings about the organisation and presented a future co-operation possibility.



Co-operation with global organisations and stakeholders



International Information Centre on Air Infiltration and Ventilation ([AIVC](#))

REHVA has been cooperating with the continued co-operation with International Information Centre on Air Infiltration and Ventilation (AIVC) for many years. In 2018, REHVA and AIVC signed a Memorandum of Understanding during the REHVA Annual Meeting 2018 in Brussels. The co-operation consists of promoting each other events, exchanging information, publish articles in the REHVA Journal, as well as publishing news and the CLIMA 2019 workshop reports in AIVC-INIVE website. The REHVA representative of INIVE-AIVC is Jaap Hogeling, who attended the AIVC meeting on 18–19 September in Juan-les-Pins, France.



The American Society of Heating, Refrigerating and Air-Conditioning Engineers ([ASHRAE](#))

The renewed MoU signed with ASHRAE in 2017 aimed at defining the new co-operation considering the increased presence of ASHRAE in Europe. The aim was to align and coordinate the activities among ASHRAE and its members and the Europe Region, with REHVA and its Member Association to avoid overlapping or conflicting activities and services. According to the MoU, a joint Task Force was set up with the aim to define co-operation models, including agreement templates between ASHRAE and REHVA/REHVA Member Associations. The Task Force continued discussions after the 2018 REHVA General Assembly to reach a final agreement between REHVA and ASHRAE while ASHRAE is expanding activities in Europe. In 2018, there was no valid MoU between the two organisations. The Task Force was working on a new MoU draft that is supposed to be ready for the 2019 Annual Meeting.



Indian Society of Heating, Refrigerating and Air Conditioning Engineers ([ISHRAE](#))

REHVA was represented by Frank Hovorka, Jaap Hogeling and Atze Boerstra at ACREX India 2018 in Bangalore, India. REHVA issued a special edition of the REHVA Journal in co-operation with Eurovent Certita Certification for the event. Both, REHVA and ISHRAE associations organised a successful joint seminar (see details in the REHVA seminars chapter). REHVA and ISHRAE issues a joint concept paper presented by vice-president Atze Boerstra and ISHRAE Research Chair Nitin Deodhar at the stage of ACREX Hall of Fame event. The statement launches a joint initiative that will result in a REHVA-ISHRAE Guidebook about IEQ in nZEB schools carried on by European and Indian experts.



China Committee of Heating, Ventilation and Air-Conditioning ([CCHVAC](#))

In 2018, Manuel Carlos Gameiro and Catalin Lungu attended the 21st National Conference on Heating, Ventilation, Air-conditioning & Refrigeration (CCHVAC 2018 conference) in China from 22nd to 28th of October. REHVA representatives were invited as speakers for the lecture on "The role and value of indoor environmental quality (IEQ) in sustainable buildings; how does it influences the Smart Readiness Indicator (SRI)". CCHVAC hosted also the first HVAC World Student Competition beyond Europe. This co-operation can be organised between the CLIMA's years.



Federation of Ibero-American Associations in Air-conditioning and refrigeration (FAIAR)

REHVA and FAIAR signed an MoU in Sevilla on 26 September 2018. REHVA appreciates the constructive role of its Spanish Member ATECYR, that has given a fundamental contribution for the achievement of this result.

Signed by the REHVA President, Prof. Stefano Corgnati, in presence of Prof. Juan Travesi, ATECYR Vice-president, the agreement will enhance the collaboration between the two Federations to promote knowledge sharing and mutual benefits for their members.



Indoor Environmental Quality – Global Alliance (IEQ-GA)

REHVA has been founding member of this global platform for indoor environmental quality that was founded as an informal network in 2014 with 4 international organisations. In 2017, the network started to consider the foundation of a membership based legal entity in Brussels, initiated by the ASHRAE President Bjarne W. Olesen. REHVA has the mandate from its Member Associations to represent European professionals in the alliance. According to a position prepared and approved by REHVA Member Associations, we encourage the inclusion of MoU societies from other continents, and aim at widening the scope of membership to cover all sectors involved in indoor environmental quality. REHVA has decided to take a lead role in the registering of the association in Brussels and volunteered to implement the necessary legal and administrative actions to develop the by-laws and register the IEQ-GA as an AISBL. Jaap Hogeling has been representing REHVA at the meetings and coordinated the work with the help of REHVA Office working on the incorporation according to Belgian law. The approval of the articles is supposed to finish in October 2019 at the AIVC conference in Ghent.

REHVA has MoUs with the following further associations



ABRAVA, Brazilian Association of Refrigeration, Air Conditioning and Heating



AIVC-INIVE, Air Infiltration and Ventilation Centre of International Energy Agency



EUROVENT, the European Committee of HVAC & R Manufacturers



IBPSA, International Building Performance Simulation Association

IIR, International Institute of Refrigeration

KIAEBS, Korean Institute of Architectural Sustainable Environment and Building Systems

SAREK, Society of Air-conditioning and Refrigerating Engineers of Korea

SHASE, The Society of Heating, Air-Conditioning and Sanitary Engineers of Japan

Venticool, The international platform for ventilative cooling



TECHNOLOGY AND RESEARCH ACTIVITIES

Exchanging technical information, transferring knowledge and disseminating the latest technology developments belong to the most important action field of REHVA. The Technology and Research Committee (TRC) oversees the related activities, in 2018 still chaired by Prof. Jarek Kurnitski, who was supported by co-chairs Prof. Livio Mazzarella and Lars Gunnarsen.

Development and dissemination of technical information: task forces, guidebooks and reports

Since 2016 REHVA has been concentrating efforts on increasing the number of Task Forces and REHVA guidebooks, as well as attracting active experts who engage in the committee and volunteer in working on guidebooks. We can proudly report that the efforts to boost the activities were successful which resulted in many new and active Task Forces with much shorter average guidebook drafting time, an increasing number of young professionals joining the TRC. REHVA published in the past two years 3 guidebooks annually and this number is expected to increase to 7 finished guidebooks in 2019. REHVA expresses its deepest gratitude to all the volunteers from its Member Associations and Supporter Companies for their indispensable contribution to these achievements.

A major improvement in 2018 was that, upon joint initiative of the TRC and the PMC, REHVA updated its guidebook cover. The visual design became more modern and the publication is now called “European Guidebook” without listing authors on the cover, to position our guidebooks as harmonized European guidelines with the connotation of a standard.

In 2018, REHVA had 13 active Task Forces:

1. Fire safety and smoke management, chaired by Othmar Brändli
2. Residential heat recovery ventilation, chaired by Jarek Kurnitski
3. Quality Management for Buildings, chaired by Ole Teisen and Stefan Plesser (linked to the QUANTUM EU project)
4. Indoor environment in historic buildings, chaired by Francesca d'Ambrosio
5. Task Force related to the Commissioning supervision certification scheme (COPILOT)
6. REHVA-ASHRAE Building Commissioning Guidelines, chaired by Ole Teisen
7. REHVA-ASHRAE Indoor Environmental Quality in Schools, chaired by Livio Mazzarella
8. Hygiene in drinking-water supply systems, chaired by Thomas Wollstein
9. Hygiene in air-conditioning systems (GB 9 update), chaired by Thomas Terhorst (from December by Frank Jansen)
10. Air filtration in HVAC systems (GB 11 update), chaired by Riccardo Romano'
11. REHVA-ASHRAE Nearly Zero Energy Hospitals, chaired by Wim Maasen
12. Weather data directory, chaired by Livio Mazzarella
13. NZEB Design Strategies for Residential Buildings in Mediterranean Regions (MedZEB), chaired by Ahmet Arisoy

In 2018, 3 new guidebooks were published as outcome:

- GB24 Fire Safety in Buildings – Smoke Management Guidelines,
- GB25 Energy Efficiency in Historic Buildings,
- GB26 Residential Heat Recovery Ventilation.

Additionally, REHVA Task forces work on 7 further guidebooks with possible publication in 2019:

- REHVA-ISHRAE guidebook on Building commissioning
- Quality Management for Buildings. Improving Building Performance through Technical Monitoring and Commissioning (co-financed by the QUANTUM project)
- Hygiene in air-conditioning systems (GB 9 update)
- NZEB Design Strategies for Residential Buildings in Mediterranean Regions (pdf only)
- Hygiene in drinking-water supply systems
- REHVA-ASHRAE joint Guidebook: Zero Energy Hospitals
- Air filtration in HVAC systems (GB 11 update)

Two New Task Forces were approved by the TRC in 2018:

- Smart Buildings, chaired by Ivo Martinac (work plan approved),
- Office buildings - EPC common scale, chaired by Jarek Kurnitski (idea approved).

EU advocacy, position papers and policy implementation

REHVA follows European policy developments linked to buildings energy efficiency, especially the review of the EPBD and other relevant EU policies (Ecodesign, Ecolabel, Energy Efficiency Directive, F-gas regulation, Clean energy Package and Energy Union). Updates about EU policy developments are regularly published in the REHVA Journal, Newsletter and Supporters' Bulletin. This activity is supported by the TRC that coordinates the development of position papers and technical comments supporting evidence based European policy development.

2018 was another intensive year regarding EU policy development with the final approval of the revised EPBD and other important legislation linked to the Clean Energy Package. REHVA, with the help of the TRC focused on the following policy dossiers.

Revised EPBD and its implementation

The final legislative document on the revised EPBD was published in June 2018 and the focus of REHVA has been shifting to support the implementation and disseminating information about the legislation. REHVA reported about the new aspects of the revised EPBD in REHVA Journal articles, newsletters and social media. REHVA seminars across the year 2018 focused on the aspects of digitalisation, smart buildings and the smart readiness indicator, among others during MCE2018, Light & Building 2018 and the REHVA Brussels Summit conference.

Another strategic priority is supporting the application and deployment of the EPB related standards, for which reason REHVA joined the EPB Center, becoming shareholder of the company initiated by ISSO. The EPB Center started a service contract in 2018 supporting its activities (see more details in the following). REHVA, with 7 REHVA Member Associations also submitted a strategic Horizon2020 proposal to work on the promotion and dissemination of the EPB standards and develop future tools and concept using performance calculation based on EPB standards.

EPBD Guidance Documents

DG Energy has started the development of EPBD Guidance Documents after the publication of the revised directive. The aim of the documents is to help national ministries and policy makers to implement the revised EPBD and define common interpretation of the revised and new paragraphs of the Directive.

Therefore, DG Energy run a consultative process with the Member States' representatives in the EPBD group while taking also stakeholders' opinion into consideration.

REHVA Office collected comments and recommendation to the informal draft guidance documents and sent the compiled inputs of REHVA Member Associations and TRC experts to DG Energy. Many REHVA experts sent valuable inputs and the comments were well-received by DG Energy that included many aspects in the documents discussed with Member States. REHVA submitted comments to the following documents:

- Annex I - energy performance calculation;
- Articles 2 and 8 - TBS;
- Article 2a - Long Term Renovation Strategies;
- Articles 8, 14 and 15 - Self-regulating devices and BACS;
- Articles 14 and 15 – Inspections.

REHVA collected also best practices and national level policy information and shared with DG Energy relevant REHVA Guidebooks (e.g. Building Commissioning, Fire Safety in Buildings) as well as technical papers from the REHVA Journal. REHVA also promoted the best-practice AMEV guide on Technical monitoring of buildings developed by the QUANTUM project. REHVA Managing Director and QUANTUM coordinator had a meeting with Sylvain Roberts and Pau Garcia-Audi, Policy Officers of DG Energy Policy in charge of the documents to explain the importance of third-party certification and the possible role from of BACS in the inspection and digital monitoring of building systems. The technical monitoring guideline is referenced in the guidance documents, and Germany continues to endorse the concept in its national standards and guidelines.

Smart Readiness Indicator

REHVA has been closely following the development of the SRI methodology. REHVA Office and TRC experts informed continuously in the REHVA Journal, Newsletter and website about updates and developments of the study preparation during 2018 and presented the SRI at several REHVA events and seminars.

TRC members provided inputs in the consultation process during the first SRI study (February 2017- August 2018) and are committed to have a stronger involvement in the second SRI study (December 2018 – July 2020).

REHVA represented its opinion at the SRI stakeholder meetings organised by the Commission and submitted written comments to the final study draft. The TRC Chair and Managing Director had a meeting with the DG Energy Policy officer and experts of the consortium preparing the SRI methodology on 21 June 2018 presenting its position and recommendations on the proposed SRI calculation methodology.

The REHVA Board decided during the REHVA Brussels Summit to set-up a specific REHVA SRI advocacy group from REHVA Board members, REHVA Supporters and TRC experts. The advocacy group will further elaborate the REHVA position on the SRI methodology in 2019, exploiting synergies with the Smart Buildings Task Force to ensure active contribution and influence the 2nd SRI study.

Co-operation with the EPB Center

REHVA started the administrative process of becoming shareholder of the EPB Center in 2018, the process will be completed in 2019.

Ever since its creation, REHVA promoted the EPB Center in the REHVA Journal, newsletters and events. REHVA was present in the European Sustainable energy Week in 2018 with a booth promoting the services of the company. The joint activities under to the service contract with DG Energy were launched during the REHVA Brussels Summit in November 2018. REHVA is dissemination partner of the EPB Center, using synergies with its EU project related to the same topic: ALDREN and CEN-CE (see description below).

Co-operation with Eurovent Certita Certification (ECC)

REHVA and ECC cooperated as usual during ACREX 2018 in India, with a joint REHVA Journal special issue sponsored by ECC. The REHVA-Eurovent joint initiative started its intensive work, and several REHVA experts of Member Associations attended the working group meeting to develop commissioning supervision certification scheme protocol that will be used in the COPILOT company. REHVA delivered a big part of the agreed contribution input that will be valued as asset in the company. Moreover, through REHVA, COPILOT was involved in QUANTUM project (QUANTUM-REHVA guidebook and QUANTUM dissemination events) and in a H2020 project proposal.

ECC initiative "ProdBIM" - a web-based service platform of a HVAC product library compatible with various phases of BIM driven projects - was introduced to TRC members in the April TRC meeting. To further widen PRODBIM audience, a technical article was published in the REHVA Journal issue 5. Moreover, PRODBIM is currently involved with a Letter of Support in BIM-SPEED project and plans for joint REHVA-PRODBIM project proposals were discussed in a dedicated web meeting.

Participation in EU projects and tenders

REHVA joins European projects aiming at the development and market deployment of innovative technologies, as well as capacity development and training of professionals related to buildings energy efficiency and indoor environment quality. In 2018, REHVA has been involved altogether in H2020 projects and two DG ENER tenders:

H2020 projects

1. BIM-SPEED project (Harmonised Building Information Speedway for Energy-Efficient Renovation), 2018-2022

BIM-SPEED will facilitate the EU-wide adoption of BIM in the housing renovation by providing all stakeholders with a set of holistic solutions consisting of:

- an open, affordable and reliable cloud-based BIM platform;
- a set of BIM tools and interoperability solutions between different tools and the BIM platform;
- validated and standardised procedures for BIM-based activities throughout the whole renovation process.

BIM-SPEED solutions will be supported with evidence from real demonstration cases during the project, as well as extending and sharing the best practices across the EU. REHVA is involved in the promotion of BIM-SPEED platform through the organization of a BIM-SPEED competition. <https://www.bim-speed.eu/en>



2. TripleA-reno project (Attractive, Acceptable and Affordable deep Renovation by a consumer orientated and performance evidence based approach) 2018-2021

The overall aim of TripleA-reno is to make acceptance and decision making on deep and nZE renovation attractive for consumers and end-users through clear and meaningful information and communication on proven performances on energy, Indoor Environmental Quality and personal health. TRC experts have been consulted for the elaboration of a labelling scheme considering jointly these parameters. <https://triplea-reno.eu/>



3. CEN-CE project (CEN Standards Certified Experts EU-wide certification and training scheme based on EPBD mandated CEN standards), 2018-2020

The objective of this proposal is to set up a large-scale qualification and training schemes to increase the skills of HVAC professionals related to CEN standards related to the EPBD and mandated by the European Commission. TRC experts were involved in the project to evaluate the quality and potential deployment of the project results on a workshop organised with the REHVA Education and Training Committee during the REHVA Brussels Summit in November 2018. <https://www.cen-ce.eu/>



4. ALDREN project (Alliance for Deep Renovation in Buildings), 2017-2020

The consortium aims at promoting the European Common Voluntary Certification Scheme (EVCS) as backbone along the whole deep renovation process of non-residential buildings. TRC experts will contribute to the definition of the EVCS-based language (energy, health, financial performances) and were invited to a workshop during the REHVA Brussels Summit in November 2018. <https://aldren.eu/>



5. hybridGEOTABS project (Model Predictive Control and Innovative System Integration of GEOTABS in hybrid Low Grade Thermal Energy Systems), 2016-2020

The MPC-GT project brings together a transdisciplinary team of SMEs, large industry, and research institutes, experienced in research and application of design and control systems in the combined building and energy world. Based on prior research and practical experience, the bottlenecks were identified that prevent a breakthrough of geothermal heat pumps (GEO-HP) combined with thermally activated building systems (TABS) - GEOTABS. The MPC-GT consortium has identified a potential integrated solution that will provide a near optimal design strategy for the MPC GEOTABS concept, using control integrated design. REHVA and the project consortium will set up a task force to write a new GEOTABS guidebook using the project results. <http://www.hybridgeotabs.eu/>



6. QUANTUM project (Quality management for building performance - improving energy performance by life cycle quality management) 2016-2019

The goal of this project is to develop and demonstrate pragmatic services and appropriate tools with high replication potential supporting quality management (QM) for building performance in the design, construction, commissioning and operation phase to close the gap between predicted and actual energy performance in European buildings. REHVA set up a joint QUANTUM-Commissioning Task Force to develop a guidebook on Quality Management for Buildings in 2017, the work became intensive in 2018. The guidebook is scheduled to be published by CLIMA 2019 together with the complementary REHVA-ISHRAE guidebook on Building commissioning. The production of the guidebook is financed by the QUANTUM project. <https://www.quantum-project.eu/about-us/>



7. PROF-TRAC project (PROFessional multi-disciplinary TRaining and continuing development in skills for NZEB principles), 2015-2018

This project developed an Open Training Platform and Qualification scheme for Continuing Professional Development for professionals in the building sector. The platform targets technical experts, architects and managers involved in nZEB design and construction. 12 REHVA Member Associations were involved in the project, attended train-the-trainer sessions and developed courses in their countries. The project closed early 2018 and trained 188 experts from 29 countries. REHVA will sustain the platform and the developed tools. <http://profrac.eu/open-training-platform-for-nzeb-professionals.html>



REHVA acts as dissemination partner in these projects using its network and existing channels to distribute information and engage with stakeholders, and HVAC professionals in Europe. REHVA Office shares regular updates about the projects in the REHVA Newsletter, Bulletin, REHVA Journal and the REHVA social media channels. More information about our EU projects is available on the REHVA website "[EU Projects](#)" section as well as on the REHVA social media.

DG ENER tenders

1. EPBD19a Service contract: feasibility study about the inspection of standalone ventilation systems

The European Commission launched a service tender in 2018 to elaborate a feasibility study on the inspection of standalone ventilation systems and an optional building passport where REHVA has joined as subcontractor the winning consortium led by INIVE and BPIE. The objective of the service contract is twofold:

- Conducting a feasibility study on the possible introduction of the inspection of stand-alone ventilation systems
- Conducting a feasibility study on an optional building renovation passport in the energy performance of buildings directive

REHVA is involved in the first part of the tender with the tasks to conduct a survey among its Member Associations, review of existing regulations, guidelines, standards and other initiatives on the inspection of stand-alone ventilation system, assess the development of the stock of ventilation systems in EU buildings till 2050 and analyse the relevance, feasibility and scope of possible measures for inspection. The service contract runs 12 months, until December 2019.

2. EPB Center service contract, 2018-2021

The purpose of the Service contract is to support the uptake of the energy performance of buildings standards by:

- Supporting Member States and National Standardisation bodies that wish to complete the national annexes of the overarching standards,
- Setting up a public frequently asked questions database on filling in annexes, practical application of the standards, etc.
- Preparing practical case studies to support the use of standards
- Disseminating and developing calculation tools for individual standards,
- Setting up a large network of current practitioners and future practitioners (i.e. building physics students) and support the uptake of standards by organising regular hands-on workshops, training sessions, etc.

TRC experts are informed about the outcomes and involved in project activities as technical expert if needed.

EDUCATION

REHVA Student Competition

During the Annual Meeting 2018 in Brussels (Belgium), REHVA organised its yearly student competition which took place on 22 and 23 April. Twelve candidates representing ten countries (Czech Republic, Estonia, France, Finland, Germany, Hungary, Italy, Romania, Serbia and Spain) were in competition; Romania and Italy being represented by a team of two students.

The jury was chaired by, **Manuel Gameiro da Silva** from Portugal, the chair of the Education and Training Committee. The jury was composed of **Uwe Schulz** from Switzerland (SWKI), **Murat Çakan** from Turkey (TTMD), **Dusan Petras** from Slovakia (SSTP), **Milos Lain** from Czech Republic (STP) and **Francis Allard** from France (AICVF).

After very intense deliberation, the jury declared as winner **Kristian Martin** from Finland for his work on "Demand Response of Heating and Ventilation within Educational Office Buildings".

The second prize was awarded to the Italian team, **Matteo Rodighiero** and **Matteo Naldi**. The third prize was awarded to the Romanian team of **Alexandra Ene** and **Claudiu Stanciu**.

Manuel Gameiro da Silva congratulated all contributors for their excellent work and emphasized the high quality of their presentations.

On Monday 23 April, at the beginning of the Annual Meeting Conference, REHVA President-elect, **Frank Hovorka** handed out the Trophy Cup to the winner and a financial reward to all three awardees sponsored by Eurovent Certita Certification. The winner presented his paper at the conference plenary.



From left: Frank Hovorka, REHVA's President-elect, Erick Melquiond, President of Eurovent Certita Certification, Kristian Martin, the winner of the REHVA Student competition and Manuel Gameiro da Silva, the chair of the jury



Students & jury 2018

The HVAC World student competition

The "HVAC World Student Competition" can be organised in the years between CLIMA congress. In 2018, the first of such competition was hosted by CCHVAC in China, co-organised with the REHVA according to the same rules. The competition took place on 25 October 2018 in Sanmenxia, Henan Province, China during the 21st China HVAC & Annual Conference.

Three of the total five MoU partners that participate in this initiative have delegated candidates to this first edition of the competition: CCHVAC, ISHRAE and SAREK, latter represented by a team of two students. REHVA delegated the winner of the 2018 REHVA Student Competition, **Kristian Martin** (Aalto University, Finland), who represented Europe in the contest.

After deliberation, the jury declared **Xingru Liu** from the Tsinghua University of Beijing (China) as winner for his work on "Developing New Vapor Injection Technologies for Single Cylinder Rotary Compressor". The second place was awarded to **Kristian Martin** from Europe. The third place was awarded to the Indian **Rana Veer Pratap Singh** from the Malaviya National Institute of Technology Jaipur. Exceptionally, the jury also awarded a fourth place to the Korean team from the Pusan National University, **Juyoung Yun** and **Hyeim Lee**.



Students & jury 2018

Manuel Gameiro da Silva handed out the certificates with a financial award to each participant sponsored by Eurovent Certita Certification represented on site by **Erick Melquiond**.



Xingru Liu, CCHVAC-China (right side)



*Rana Veer Pratap Singh,
ISHRAE-India (right side)*



*Kristian Martin, FINVAC-Finland
(right side)*



*Juyoung Yun and Hyeim Lee,
SAREK-Korea*

REHVA EVENTS

Seminars and conferences at trade shows and industry fairs

During the year 2018, REHVA organised five seminars on:

Residential Ventilation Experiences in Europe and North America Towards NZEB Design and Operation

During ASHRAE Winter Meeting in Chicago, United States on 21 January, organised on basis of the MoU between ASHRAE and REHVA. With this technical session REHVA wanted to share knowledge and experience in the field of residential ventilation between Europe and North America. Given the fact that residential, IEQ and NZEB are also main focus of ASHRAE strategy and the current ASHRAE presidential focus we considered this seminar as very beneficial for the ASHRAE membership and REHVA.

EPBD 2nd recast: opportunities and critical aspects

During MCE - Mostra Convegno Expocomfort in Milan, Italy on 13 March AiCARR and REHVA organised their traditional joint seminar about updates of the 2nd EPBD recast. The EPBD is a key instrument to keep European building industry a market leader in the low carbon transition. The event provided the audience with policy updates and highlighted technology challenges and opportunities for the HVAC sector. AiCARR President Francesca Romana and REHVA President, Stefano P. Corgnati chaired the seminar, REHVA Managing Director, Anita Derjanecz presented the EPBD recast updates, REHVA Journal editor in chief, Jaap Hogeling talked about the new set of EPB standards, Stefano P. Corgnati about the role of digitalisation in the new EPBD and the digital transformation of the HVAC sector, and Livio Mazzarella presented the Smart Readiness Indicator, a novelty of the new EPBD.

Designing healthy nearly Zero Energy schools

During ACREX 2018 in Bangalore, India on 23 February, REHVA and ISHRAE organised their traditional joint seminar discussing faces the task of designing healthy nearly Zero Energy schools, with European and Indian experts taking the floor to explain how the HVAC industry can support and benefit from this challenge. Speakers from ISHRAE, REHVA and Eurovent Certified Certification and the NEEV Academy provided to the +100 seminar attendees with interesting insights about the current situation of Indian and European schools in terms of thermal comfort and IEQ, the most suitable technologies to improve these conditions, and how to manage the energy implications of an IEQ-oriented design.

Smart building & digitalisation in the new EPBD. Policies and implementation in practice

REHVA organised at Light+Building 2018 in Frankfurt, Germany on 20 March a seminar that covered the new EPBD with focus on digitalisation and smart buildings, two key aspects transforming the HVAC sector. The speaker panel consisted of key REHVA experts and Supporter Companies: Jarek Kurnitski talked about smart buildings, energy and indoor environmental quality related aspects of the revised EPBD; Ilari Aho (Uponor) about IoT and digitalisation in the HVAC sector; Henk Kranenberg (DAIKIN) about BIM for HVAC systems; Stefan Plesser about digitalisation enabling high performance and quality management linked to the QUANTUM projects, and Atze Boerstra about the new EN 16798-1 standard on Indoor Environmental Quality. The popular seminar was followed by a reHVAClub cocktail offering an informal networking opportunity for all participants.

HVAC facilities in Nearly Zero Energy Buildings

On 25 September 2018, REHVA in co-operation Atecyr, organised a well-attended seminar at the Eurovent Summit organised in Sevilla about the new Spanish Technical Building Code, the revised EPBD and the related technological aspects and challenges. This joint seminar explored high-efficiency design solutions for HVAC systems suitable for applications in new buildings. REHVA President Stefano P. Corgnati gave a keynote speech

about digitalisation related technology trends in the HVAC sector, followed by Atecyr experts presenting the new Spanish building code, efficient systems in nZEBs and presented case studies of different building types.

The programme and presentations of these events are available on the REHVA website/Event presentations section <https://www.rehva.eu/events/event-presentations.html>.

REHVA representation at Members' events

During the year 2018, REHVA was represented in the following events organised by Member Associations:

AIR Conference on "Instalatiile Pentru Constructii si Confortul Ambiental", Timisoara, Romania, 22-23 March

REHVA was represented by Stefano P. Corgnati, President

13th International HVAC&R Technology Symposium (TTDM), Istanbul, Turkey, 12-14 April

REHVA was represented by President Stefano P. Corgnati

36th AICVF Congress, Lille, France, 27-28 September

REHVA was represented by Frank Hovorka, President-elect

FinnBuild 2018 fair (FINVAC), Helsinki, Finland, 10-12 October

REHVA was represented by Jarek Kurnitski, REHVA TRC Chair and Vice-president

The 18th Climatization Days of Ordem dos Engenheiros, Lisbon, Portugal, 25 October

REHVA was represented by Stefano P. Corgnati, President

National Congress on Air-Quality (Atecyr), Madrid, Spain, 22-23 November

REHVA was represented by Manuel Gameiro da Silva, REHVA EC Chair and Vice-President

The 49th International HVAC&R Congress and Exhibition (KGH-SMEITS), Belgrade, Serbia, 5-7 December

REHVA was represented by Frank Hovorka, President-elect

Exhibitions

REHVA is represented or is endorsing international fairs and exhibitions of the HVAC and construction sector each year, to promote our publications and expertise. During the year 2018, REHVA was present at the following fairs:

- AHR Expo, Chicago, USA, 22-24 January
- ICABS 2018: 20th International Conference on Applications of Building Simulation, Innsbruck, Austria, 25-27 January
- Aquatherm Moscow, Moscow, Russia, 6-9 February
- ISK-Sodex, Istanbul, Turkey, 7-10 February
- ACREX 2018, Bangalore, India, 22-24 February
- Aquatherm Prague, Prague, Czech Republic, 28 February – 2 March
- WSED – World Sustainable Energy Days 2018, Wels, Austria, 28 February – 2 March
- Cold Climate HVAC Conference 2018, Kiruna, Sweden, 12-15 March

- Light+Building, Frankfurt, Germany, 11-15 March
- MCE - Mostra Convegno Expocomfort 2018, Milan, Italy, 13-16 March 2018
- Conference "INSTALATIILE PENTRU CONSTRUCTII SI CONFORTUL AMBIENTAL", Timisoara, Romania, 22-23 March
- 13th International HVAC&R Technology Symposium, Istanbul, Turkey, 12-14 April
- Greenbuild Europe, Berlin, Germany, 16-18 April
- ISH China & CIHE, Beijing, China, 22-24 May
- 2nd Buildings India 2018, New Delhi, India, 23-25 May
- EUSEW 2018, Brussels, Belgium, 4-8 June
- RCEP, Bucharest, Romania, 7-10 June
- ASHRAE Meeting 2018, Houston, USA, 22-27 June
- 1st BIM SPEED Conference, Brussels, Belgium, 25 June
- Workshop on energy efficiency opportunities while phasing-down HFCs, Vienna, Austria, 9-10 July
- The City of Green Buildings Academy, Cluj-Napoca, Romania, 17 July-2 August
- ASEAN M&E, Kuala Lumpur, Malaysia, 17-19 July
- ISIAQ Indoor Air conference, Philadelphia, USA, 22-27 July
- ISH Shanghai & CIHE 2018, Shanghai, China, 3-5 September
- Building Simulation, Cambridge, United Kingdom, 11-12 September
- ENERGODOM 2018, Krakow, Poland, 11-12 September
- The 38th AIVC conference "Ventilating healthy low-energy buildings", Nottingham, United Kingdom, 13-14 September
- 45th anniversary of Daikin Europe, Ostend, Belgium, 13 September
- AIVC Conference, Juan-les-Pins, France, 18-19 September
- 3rd Annual HVAC Summit Dubai, Dubai, UAE, 18-19 September
- Global District Energy Days, Helsinki, Finland, 25-27 September
- Eurovent Summit, Sevilla, Spain, 25 September
- FinnBuild, Helsinki, Finland, 10-12 October
- Chillventa, Nurnberg, Germany, 16-18 October
- 18th Climatization Days of Ordem dos Engenheiros, Lisbon, Portugal, 25 October
- ATECYR National Congress on Air-Quality, Madrid, Spain, 22-23 November
- HVAC & R - 21st National Conference on Heating, Ventilation, Air-conditioning & Refrigeration, Zhengzhou, China, 23-27 November
- Retrofit Europe "SBE19 NL" conference, Eindhoven, The Netherlands, 5-7 November
- REFCOLD India 2018, Gandhinagar, India, 22-24 November
- 1st Middle East HVAC Expo, Dubai, UAE, 26-29 November
- 49th International HVAC&R Congress and Exhibition, Belgrade, Serbia, 5-7 December

AWARDS

The REHVA Awards were delivered at the ATIC Anniversary and REHVA Professional Awards Dinner held on Sunday 22 April during the Annual Meeting 2018 in Brussels, Belgium.

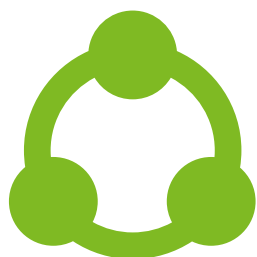
The following members of REHVA Member Associations were recognised for their outstanding achievements in different activities within the HVAC fields or for their special contribution to REHVA and received a REHVA Award handed over by **Stefano P. Corgnati**, the REHVA President.

Serafin Grana (OdE-Portugal) received a REHVA professional award in design and was recognized for his outstanding achievements in the design of HVAC systems and for his contributions to improve energy efficiency and the indoor environment of buildings.

Ivan Chmúrny (SSTP-Slovakia) received a REHVA professional award in education and was recognized for his outstanding academic achievements and for his contributions to improve energy efficiency and the indoor environment of buildings.



Serafin Grana, OEP Portugal



Ivan Chmúrny, SSTP-Slovakia

Bernd Pasterkamp (VDI-Germany) and **Risto Kosonen (FINVAC-Finland)** received a REHVA professional award in technology and were recognized for their outstanding achievements in technology and for their contributions to improve energy efficiency and the indoor environment of buildings.

Aleksandrs Zajacs (AHGWTEL/LATVAC-Latvia) and **Tuomo Niemelä (FINVAC-Finland)** received a REHVA Young Scientist Award and were recognized for their outstanding scientific achievements and for their contributions to improve energy efficiency and the indoor environment of buildings.

Special REHVA Supporters' awards were also handed over to the CEO of **Uponor**, **Jyri Luomakoski** to celebrate their company's 100-years anniversary and acknowledge their longstanding collaboration with REHVA.

The **Swegon** Group Competence Director, **Mikael Börjesson** received also a special REHVA Supporters' award as a tribute for being our committed supporter for more than a decade.



Bernd Pasterkamp,
VDI-Germany



Risto Kosonen,
FINVAC-Finland



Aleksandrs Zajacs, AHGWTEL/
LATVAC-Latvia



Tuomo Niemelä,
FINVAC-Finland



Jyri Luomakoski,
Uponor-Finland

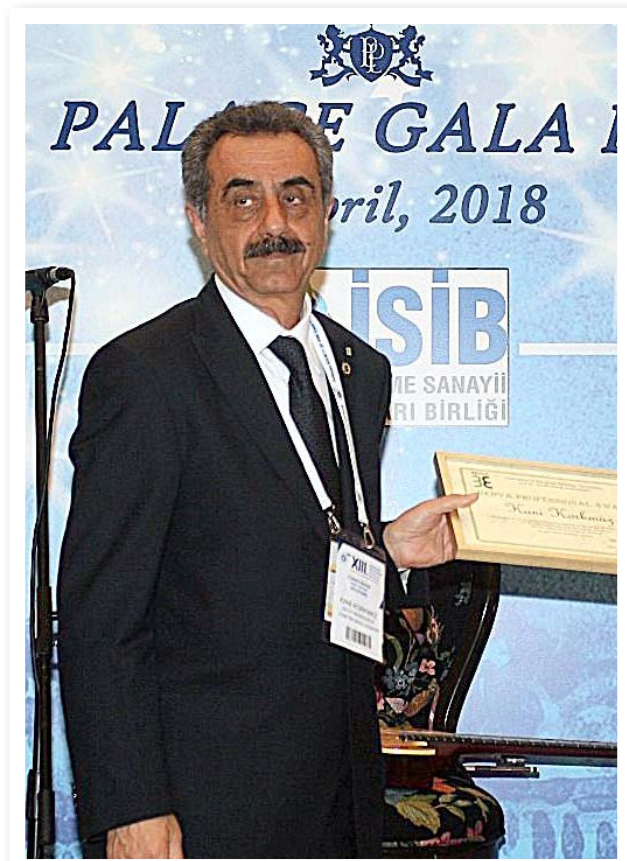


Mikael Börjesson,
Swegon-Sweden

Kani Korkmaz (TTMD-Turkey), received a REHVA professional award in design and was recognized for his outstanding achievements in the design of HVAC systems and for his contributions to improve energy efficiency and the indoor environment of buildings.

On the other hand, TTMD received a REHVA Award in occasion of its 25th anniversary, to celebrate its longstanding dedication to scientific and technological development in the field of mechanical service systems for buildings and environmental engineering in Turkey.

Both awards had been presented in the opening ceremony and the gala dinner of TTMD's International Symposium held 12-14th April 2018 in Istanbul.



Kani Korkmaz, TTMD-Turkey



Award to our Turkish Member TTMD

Stefano P. Corgnati handed over a REHVA award to Rhoss General Manager **Andrea Corradi**, Sales Director **Stefano Canali** and Marketing Manager **Leonardo Prendin** to commemorate the 50-years anniversary and the strong technological leadership of the company proved by investing in constant research and development striving for the most innovative technological solutions.



Rhoss, REHVA supporter company, celebrated its 50th anniversary at Mostra Convegno.



During the dinner of the Brussels Summit, REHVA President **Stefano P. Corgnati** handed over a special award to **Frans Hoorelbeke**, chairman of Daikin Europe to celebrate the joint 45th anniversary of the company and commemorating that DAIKIN Europe has been a true REHVA supporter company for a decade the same year.



AHGWTel / LATVAC, the Association of Heat, Gas and Water Technology Engineers of Latvia, conferred, in May 2018 in Riga, a REHVA Professional Award in Technology to **Egils Dzelzitis**.



EKVU, the Estonian Society of Heating and Ventilation Engineers, conferred, on 28 March 2018, a REHVA Professional Award in Design to **Albert Rodin**. The Award was handed over by **Jarek Kurnitski**, REHVA Vice-president and Chair of the Technology and Research Committee.

REHVA ADMINISTRATION

General Assembly

The 62nd General Assembly was hosted by ATIC, Association Royale de la Technique du chauffage, de la ventilation et de la climatisation - Koninklijke vereniging van de verwarmings-, ventilatie- en klimaatbeheersingstechniek, Belgium on 22 April 2018.

Joris Mampaey, President of ATIC, welcomed the audience. Stefano P. Corgnati opened the General Assembly focusing on the general overview of REHVA activities in 2017 and on the key points of REHVA's 2018 activities. The most relevant outcome of the General Assembly has been the election of the President-elect, Frank Hovorka, former REHVA Treasurer, whose mandate will start in 2019. The articles of REHVA were also amended. The previously separate articles and by-laws were merged into a single articles' document that includes now some necessary legal and administrative modifications. The General Assembly approved with unanimity of votes cast the proposed articles as the valid official new articles of REHVA ASBL.

The General Assembly approved the annual report and the accounts of the year 2017 as well as the budget for 2018 and the preliminary 2019 budget. 23 out of the 27 member associations were present or represented at this 62nd General Assembly. 1 out of the 27 Member Associations was excused. 4 Member Associations were not present. 48 representing these 23 Member Associations attended the General Assembly.

Board meetings

Six board meetings were held in 2018, namely in Livorno Ferraris (9 February, Italy), Brussels (22 April, Belgium), Seville (26 September, Spain), Brussels (12 November, Belgium). Also, a WebEx meeting was also organised on 25 June.

Standing Committee's members

In 2018, REHVA activities have been organised under six Standing Committees in order to have an active core of colleagues strongly involved in their activities. The core members of the Standing Committees participated actively in the committee meetings and activities.

Please find in the following the list of the core members of all the Standing Committees (as per 31/12/2018):

Awards Committee

- **Chair:** Stefano P. Corgnati, Italy
- Karel Kabele, Czech Republic
- Livio Mazzarella, Italy
- Bjarne W. Olesen, Denmark
- **Secretary:** Nathalie Wouters

External Relations Committee

- **Chair:** Jaap Hogeling, The Netherlands
- **Co-Chair:** Guangyu Cao, Finland
- Francis Allard, France
- Tuba Bingol Altioek, Turkey
- Edith Barna, Hungary
- Hans Besselink, The Netherlands
- Hywel Davies, United Kingdom
- Ioan Silviu Dobosi, Romania
- Karel Kabele, Czech Republic
- Juan Travesi, Spain
- **Secretary:** Anita Derjanecz

Education and Training Committee

- **Chair:** Manuel Gameiro da Silva, Portugal
- **Co-Chair:** Juan Travesi, Spain
- Edith Barna, Hungary
- Marianna Brodach, Russia
- Murat Cakan, Turkey
- Stefano P.Corgnati, Italy
- Francesca R. d'Ambrosio, Italy
- Liviu Drughean, Romania
- Egils Dzelzitis, Latvia
- Robert Gavriluc, Romania
- Frank Hovorka, France
- Karel Kabele, Czech Republic
- Targo Kalamees, Estonia
- Risto Kosonen, Finland
- Birol Kilkis, Turkey
- Risto Kosonen, Finland
- Catalin Lungu, Romania
- Zoltan Magyar, Hungary
- Joris Mampaey, Belgium
- Dusan Petras, Slovakia
- Michael Schmidt, Germany
- Uwe W. Schulz, Switzerland
- Marija Todorovic, Serbia
- **Secretary:** Nathalie Wouters

Publishing and Marketing Committee

- **Chair:** Frank Hovorka, France
- **Co-Chair:** Francesco R. d'Ambrosio, Italy
- Marianna Brodach, Russia
- Guangyu Cao, Finland
- Murat Cakan, Turkey
- Christian Feldmann, France
- Andy Ford, United Kingdom
- Karel Kabele, Czech Republic
- Renato Merati, Italy
- Birgit Muller, Germany
- Rafael Vasquez, Spain
- Maija Virta, Finland
- **Secretary:** Rebeka Maršňjak

Supporters Committee

- **Chair:** Atze Boerstra, the Netherlands
- **Co-Chair:** Ioan Silviu Dobosi, Romania
- Ilari Aho, Finland
- Bengt Johanssen, Finland
- Jaap Hogeling, the Netherlands
- Frank Hovorka, France
- Henk Kranenberg, the Netherlands
- Monica Marza, France
- Livio Mazzarella, Italy
- Renato Merati, Italy
- Panu Mustakallio, Finland
- Leonardo Prendin, Italy
- Jan Risen, Sweden
- Olli Seppänen, Finland
- **Secretary:** Anita Derjanecz

Technology & Research Committee

- **Chair:** Jarek Kurnitski, Estonia
- **Co-Chair:** Ivo Martinac, Sweden
- **Co-Chair:** Pedro Vicente Quiles, Spain (from April 2018)
- **Co-Chair:** Livio Mazzarella, Italy
- Francis Allard, France
- Ahmet Arisoy, Turkey
- Hans Besselink, The Netherlands
- Anatolijs Borodinecs, Latvia
- Murat Cakan, Turkey
- Guangyu Cao, Norway
- Hywel Davies, United Kingdom
- Ioan Silviu Dobosi, Romania
- Christian Feldmann, France
- Serafin Grana, Portugal
- Lars Gunnarsen, Denmark
- Jaap Hogeling, The Netherlands
- Frank Hovorka, France
- Karel Kabele, Czech Republic
- Ian Knight, United Kingdom
- Risto Kosonen, Finland
- Michal Krajčík, Slovakia
- Catalin Lungu, Romania
- Zoltan Magyar, Hungary
- Gabrielle Masy, Belgium
- Jorma Railio, Finland
- Olli Seppänen, Finland
- Igor Sikarczyk, Belgium
- Martin Thalfeldt, Estonia
- Branislav Todorovic, Serbia
- **Secretary:** Tiziana Buso

REHVA Office

The REHVA registered seat is in rue Washington 40, 1050 Brussels, Belgium.

Changes in the REHVA Office staff in 2018

In 2018 the REHVA team grew and the responsibilities of the team have changed as listed in the summary below.



ANITA DERJANECZ
Managing Director

- REHVA office executive management
- Business development
- EU public affairs and advocacy
- REHVA Supporters' Liaison
- EU project development and implementation
- Supporters Committee secretary
- External Relations Committee secretary



MATTEO URBANI
Assistant Project Engineer,
from 26 November 2018

- EU project implementation and management
- Supporting REHVA technical activities
- Technology and Research Committee (TRC) secretary
- Support of Task Forces, and technical publications



NATHALIE WOUTERS
Office and Membership Manager

- Office management, HR
- Membership liaison
- REHVA Student competition
- REHVA Awards
- REHVA Board meetings' secretariat
- REHVA Annual meetings, General Assembly secretary
- Education and Training Committee & REHVA Awards Committee secretary



REBEKA MARŠNJAK
EU Policy and International Relations Officer,
from 19 February 2018

- EU policy monitoring and public affairs
- REHVA Journal and publications: editorial assistance, production and marketing
- REHVA membership activities
- REHVA international relations and MoUs
- Publishing and Marketing Committee secretary
- REHVA website development



GIULIA MARENGHI
Project Communication Officer

- Financial and administrative management of EU projects
- Events management and promotion
- REHVA website development, content and & social media management
- REHVA promotion and marketing
- Secretarial support



ANDREI VLADIMIR LITIU
Project Consultant based on a service contract



TIZIANA BUSO
Project Manager

- EU project implementation and management
- EU proposal writing
- Supporting REHVA technical activities
- Technology and Research Committee (TRC) secretary
- Support of Task Forces, and technical publications

ANNEX 1: REHVA MEMBERS

ABOK, Association of Engineers in Heating, Ventilation, Air-conditioning, Heat Supply & Building Thermal Physics, RUSSIA



AHGWTEL / LATVAC, Association of Heat, Gas and Water Technology Engineers of Latvia, LATVIA



AiCARR, Associazione Italiana Condizionamento dell'aria, Riscaldamento Refrigerazione, ITALY



AICVF, Association des Ingénieurs en Climatique, Ventilation et Froid, FRANCE



AIIR-AGFR-AFCR, Romanian Association of Installations Engineers (AIIR). Romanian General Association of Refrigeration (AGFR) and Romanian Association of Refrigeration and Criogeny (AFCR) are affiliated to AIIR, ROMANIA



AIIRM, Installation Engineers Association from Moldova, MOLDAVIA



ATECYR, Asociación, Técnica Española de Climatización y Refrigeración, SPAIN



ATIC, Association Royale Technique de l'Industrie du Chauffage, de la Ventilation et des Branches Connexes, Koninklijke Technische Vereniging van de Verwarmings en Ventilatiesnijverheid en der Aanverwante Takken, BELGIUM



CIBSE, Chartered Institution of
Building Services Engineers,
UNITED KINGDOM



Danvak, Danish Society of Heating,
Ventilating and Air conditioning
Engineers, DENMARK



EKVÜ, the Estonian Society of
Heating and Ventilation Engineers,
ESTONIA



ÈTE, Scientific Society for
Building, Hungarian Coordinating
Association of Building Engineering,
HUNGARY



FINVAC, joint organization in
which 4 national societies of HVAC
organizations (SulVI, VSF, SIY, LIVI),
FINLAND



HKIS, Hrvatska Komora Inženjera
Strojarstva (Croatian Chamber of
Mechanical Engineers), CROATIA



KGH, Serbian HVAC-R Society c/o
Union of Mechanical and Electrical
Engineers of Serbia (SMEITS),
SERBIA



LITES, Lietuvos šiluminės technikos
inžinierių asociacija (Lithuanian
Thermotechnical Engineer's Society),
LITHUANIA



NORVAK, Norsk VVS Energi- og
Miljøteknisk Forening (Norwegian
Society of HVAC Engineers,
NORVAC), NORWAY



MMK, Magyar Mérnöki Kamara
(Hungarian Chamber of Engineers),
HUNGARY



ORDEM DOS ENGENHEIROS,
PORTUGAL



PZITS, Polskie Zrzeszenie Inżynierów
i Techników Sanitarnych, POLAND



SITHOK, Slovenian Society for
Heating, Refrigerating and Air-
conditioning Engineers, SLOVENIA



SSTP, Slovenska spoločnosť pre
techniku prostredia (Slovak Society
for Environmental Technology),
SLOVAKIA



STP, Společnost pro techniku
prostředí (Society of Environmental
Engineering), CZECH REPUBLIC



SWEDVAC, Energi- och
Miljötekniska Föreningen (Swedish
HVAC Society - Society of Energy
and Environmental Technology),
SWEDEN



SWKI, Schweizerischer Verein
von Gebäudetechnik Ingenieuren
– Société suisse des ingénieurs
en technique du bâtiment,
SWITZERLAND



TTMD, Türk Tesisat Mühendisleri
Derneği (Turkish Society of HVAC
and Sanitary Engineers), TURKEY



TVVL, Nederlandse Technische
Vereniging voor Installaties
in Gebouwen (Dutch Society
for Building Services), THE
NETHERLANDS



VDI, Verein Deutscher Ingenieure
e.V. (Association of German
Engineers) - Fachbereich
Technische Gebäudeausüstung
der VDI-Gesellschaft Bauen und
Gebäudetechnik – VDI/GBG
(Division Building Services of VDI-
Society for Civil Engineering and
Building Services), GERMANY



ANNEX 2: REHVA SUPPORTERS

Aermec, Italy

Air-conditioning



amca international, USA

Not-for-profit association of the world's manufacturers of fans, louvers, dampers, air curtains, air flow measurement devices, ducts, acoustic attenuators and other air system components



Baltimore Aircoil International, Belgium

Global leader in developing, manufacturing and distributing evaporative or hybrid cooling and ice thermal storage products



Belimo Automation, Switzerland

Developer, manufacturer and distributor of electric actuators for air dampers and valve technology for heating, ventilation and air conditioning systems (HVAC)



C.I.A.T., France

Wide range of products in the fields of air conditioning, heating, refrigeration and air handling and provides expert guidance in sustainable solutions for increased comfort, quality and energy saving



Camfil, Sweden

Manufacturer of filters and clean air solutions



Daikin Europe, Belgium

Air-conditioning, heating and refrigeration solution provider



Dosetimpex, Romania

Designing, executing and delivering installation equipment for constructions



Eneko, Turkey

Ventilation and heat/energy recovery systems



EPEE (European Partnership for Energy and the Environment), Belgium

Expert Association in the field of refrigeration and air comfort



ES-SO, European Solar-Shading Organization, Belgium

Promotion of solar shading and energy savings and comfort

**Eurovent Certita Certification, France**

Certification of the performance ratings of air-conditioning and refrigeration products according to European and international standards

**Evapco Europe, Italy**

Specialists in heat transfer products & services

**Fläkt Group, Sweden**

European market leader for energy efficient Indoor Air Technology Solutions, providing the highest quality standards for improved Air Comfort and well-being

**FRITERM Teknik Cihazlar Sanayi ve Ticaret, Turkey**

Manufacturer of finned type heat exchangers and focused on the production of Air Cooled Condensers, Air Coolers, Dry Coolers, Water/Steam Air Heaters and Coolers, Oil Coolers and Heat Recovery Coils

**Grandlund, Finland**

A building services consulting firm

**Halton, Finland**

Products for ventilation and air handling systems, commercial kitchen ventilation, marine air conditioning

**LG Electronics, France**

Improvement of customer's life and business with leading products and world-class technology

**Lindab, Denmark**

Developer, manufacturer and distributor of products and system solutions primarily in steel for simplified construction and improved indoor climate

**RETTIG ICC (Indoor Climate Comfort), Netherlands**

Manufacturer of radiators, underfloor heating, valves and controls



RHOSS, Italy

Specialised in the design and production of air conditioning and air handling products and systems

**Royal Haskoning DHV, The Netherlands**

Independent international engineering and project management consultancy

**Skanska Commercial Development Nordic, Sweden**

Project development and construction company, developing offices, homes and infrastructure projects

**Smay, Poland**

Consulting and production company who provides the solutions and devices in the range of ventilation

**Smits van Burgst consulting engineers, Netherlands**

Engineering consultants in the field of building services, telecommunication, building security, building physics, energy management, information technology in buildings, internal transport, as well as maintenance management

**Swegon, Sweden**

Indoor climate for people and environment specialising in ventilation and air handling equipment

**Systemair, Sweden**

Manufacturer of air handling and ventilation products and fans

**Uponor Corporation, Finland**

Heating systems for all building types

**Velux, Denmark - New**

Manufacturer who create better living environments using daylight and fresh air through the roof

**Waldhauser+Hermann, Switzerland**

HVAC engineering consultancy company



REHVA

Federation of European Heating, Ventilation and Air Conditioning Associations

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Founded in 1963, REHVA, The Federation of European Heating, Ventilation and Air Conditioning Associations represents a network of more than 100.000 engineers from 26 European countries.

REHVA is the leading European professional organization whose main activity is to develop and disseminate technology and information for mechanical services of buildings.

REHVA is committed to advancing its programs and services for young engineers, through helping them build their professional foundations.

www.rehva.eu

REHVA

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