



Newsletter

Historical Article: Danfoss

Read about the history behind Danfoss, how they began and where they are heading!

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Passive Design: Self-Sufficient Sámi Community Hub to Withstand Extreme Conditions North of Arctic Circle

Read about this unique Passive House which is north of the Arctic circle in Norway!

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Legislative Efforts in Helsinki for a Healthy and Sustainable Built Environment

Read about the recent legislative measures and initiatives in Helsinki which will shape the built environment in the future.

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ASHRAE Decarbonization Challenge 2024-2025

Dennis Knight has announced his presidential theme, workforce development and DEI. His plan includes continuing the Decarbonization Challenge Fund, a year-long competitive fund (\$1,000-\$10,000) program to implement decarbonization projects within local chapters that are tied to this year's presidential theme. This program is implemented through the YEA committee with grassroots outreach through the YEA chairs/committees at each chapter.

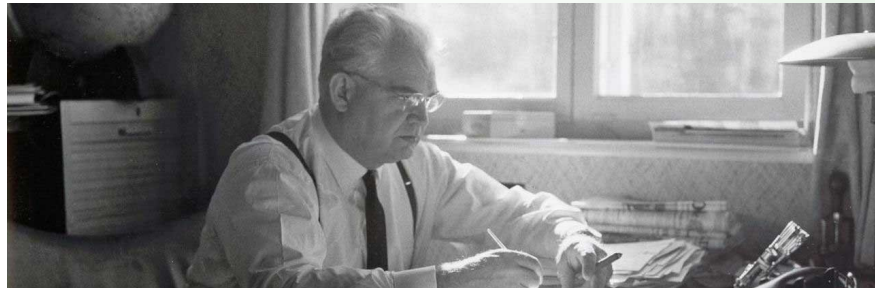
In order to apply for The Decarbonization Challenge Fund, the primary applicant must be a Full, Associate or Affiliate ASHRAE member. **This program is implemented through the YEA committee with grassroots outreach through the YEA chairs/committees at each chapter.** Click on the link below for more details or to submit an application.

<https://www.ashrae.org/about/yea-decarb-initiative>

See the CEBD website for more information on Building Decarbonization.

<https://www.ashrae.org/about/cebd-center-of-excellence-for-building-decarbonization>

Historical Article: Danfoss



Historical Committee

Founded in 1933 by Mads Clausen in Nordborg, Denmark, Danfoss has grown from a small enterprise into a global leader in engineering solutions. With a strong focus on HVAC&R (Heating, Ventilation, Air Conditioning, and Refrigeration) and sustainability, Danfoss has consistently pushed the boundaries of innovation to create a more sustainable future. This article delves into the company's rich history and highlights its significant achievements in these critical areas.

Early Innovations in HVAC&R

Danfoss's journey in HVAC&R began with the invention of the thermostatic expansion valve in 1933, which revolutionized refrigeration systems by improving efficiency and reliability³. This innovation laid the foundation for Danfoss's future successes in the HVAC&R industry. In the 1940s, Danfoss introduced one of the world's first radiator thermostats, which allowed for precise temperature control in heating systems³. These early products set the stage for Danfoss's reputation as a pioneer in HVAC&R technology.

Breakthrough Technologies

Throughout the decades, Danfoss continued to innovate. In the 1960s, the company developed the world's first mass-produced frequency converters, which significantly improved the energy efficiency of electric motors³. This breakthrough was a game-changer for various industries, including HVAC&R, as it allowed for better control and reduced energy consumption.

In recent years, Danfoss has focused on developing advanced solutions for modern HVAC&R systems. The introduction of the Turbocor compressor, an oil-free, magnetic-

bearing compressor, marked a significant milestone. This technology offers unparalleled energy efficiency and is widely used in commercial buildings, and data centers². Additionally, Danfoss has been at the forefront of promoting low-GWP (Global Warming Potential) refrigerants, which are crucial for reducing the environmental impact of HVAC&R systems².

Commitment to Sustainability

Sustainability is at the core of Danfoss's mission. The company has made significant strides in reducing its carbon footprint and promoting energy efficiency. Danfoss's sustainability strategy focuses on three key areas: decarbonization, circularity, and diversity, equity, and inclusion¹.

Decarbonization Efforts

Danfoss is committed to achieving carbon neutrality by 2030. The company has implemented various measures to reduce its scope 1 and 2 emissions, including securing long-term Power Purchase Agreements (PPAs) in North America and China⁴. These agreements are expected to result in substantial reductions in emissions, contributing to Danfoss's overall sustainability goals.

Circularity and Innovation

Danfoss is also dedicated to promoting circularity by designing products that are safe, efficient, and recyclable¹. The company's focus on innovation has led to the development of cutting-edge technologies that support the green transition. For example, Danfoss's heat pumps, equipped with advanced scroll compressors and variable-speed drives, are helping to decarbonize buildings

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by providing efficient heating solutions².

Global Impact and Future Outlook

Danfoss's impact extends beyond its products. The company actively collaborates with industry partners, customers, and stakeholders to drive the green transition. By integrating sustainability into every aspect of its operations, Danfoss is positioning itself as a leader in the fight against climate change¹.

Looking ahead, Danfoss aims to continue its legacy of innovation and sustainability. The company is investing in new technologies and expanding its capabilities to meet the growing demand for energy-efficient solutions. With a strong commitment to engineering tomorrow, Danfoss is well-equipped to lead the HVAC&R industry into a more sustainable future.

Conclusion

Danfoss's history is a testament to its unwavering commitment to innovation and sustainability. From pioneering HVAC&R technologies to championing decarbonization and circularity, Danfoss has consistently demonstrated its dedication to creating a better world. As the company continues to evolve, its contributions to the HVAC&R industry and sustainability will undoubtedly leave a lasting impact.

¹: [Danfoss Sustainability](https://www.danfoss.com/en/about-danfoss/company/sustainability/)

²: [Danfoss HVAC/R Solutions](https://www.hvacinformed.com/news/danfoss-highlights-solutions-sustainable-buildings-ahr-co-1572329625-ga-co-1605117968-ga-co-1689931958-ga.1706858494.html)

³: [Danfoss History](https://www.danfoss.com/en/about-danfoss/company/history/)

⁴: [Danfoss Annual Report 2023](https://www.danfoss.com/annual-report-2023/sustainability/)

(1) Our journey to building a better future | Danfoss. <https://www.danfoss.com/en/about-danfoss/company/history/>.

(2) Harnessing Danfoss' HVAC/R Solutions For Energy-Efficient Buildings <https://www.hvacinformed.com/news/danfoss-highlights-solutions-sustainable-buildings-ahr-co-1572329625-ga-co-1605117968-ga-co-1689931958-ga.1706858494.html>.

(3) Sustainability - Danfoss. <https://www.danfoss.com/en/about-danfoss/company/sustainability/>.

(4) Sustainability | Danfoss annual report 2023 | Danfoss. <https://www.danfoss.com/annual-report-2023/sustainability/>.

Passive Design: Self-Sufficient Sámi Community Hub to Withstand Extreme Conditions North of Arctic Circle

High Performance Buildings (Norway)

Building a cultural and educational hub that houses a theater, high school and reindeer-herding school seems like enough of a challenge. How about situating it north of the Arctic Circle, where temperatures can reach -49°F (-45°C), and making it 90% self-sufficient in heating and cooling? Impossible, right? Think again. A team of architects and designers took on this challenging building project in Kautokeino, Norway, and delivered on it with impressive results. One of the striking achievements of the newly opened building is that it fulfills the stringent passive house standard despite its frigid location.



Read more: <https://www.thecooldown.com/green-tech/coarvematta-building-sami-norway-architecture/>

Over 40 Society Scholarships Available!

Through its Society Scholarship Program, ASHRAE seeks to motivate students worldwide to pursue an engineering career in the HVAC&R field that will further promote sustainable technology for the built environment. Scholarships range from \$3,000 to \$12,500 and awarded for the academic year following the application deadline beginning with the fall semester. Qualified students are encouraged to apply at Scholarship Program (ashrae.org). ASHRAE is currently accepting applications for our Undergraduate Engineering, Engineering Technology, Regional/Chapter, & University-specific Scholarships. The deadline for applications and supporting materials is December 1st. For additional information, please contact:

scholarships@ashrae.org.

CEBD - Center of Excellence for Building Decarbonization

Join Us on the Journey to Zero!

Building owners, government jurisdictions and industry professionals around the world are responding to accelerating climate change and recognizing that building decarbonization is a significant component to their efforts. The worldwide building sector accounts for about 40% of energy-related carbon emissions and the global building stock is predicted to double by the year 2060.

Are you interested in participating in projects on decarbonization? If so, please send an email to:

decarb@ashrae.org

Chapter Leadership Academy ASHRAE Headquarters

Atlanta, GA January 10-11, 2025

Chapter Leadership Academy is a crash course designed to simplify the learning curve of all things ASHRAE for chapter leaders. Over the course of a day and a half, attendees will gain a better understanding of how ASHRAE Society functions and obtain useful and practical knowledge essential for honing leadership skills. The program will also include sharing tips and best practices that attendees can confidently take back to their Chapters for implementation. Attendees help shape the discussion, too! A significant part of 3 the program will be based on hot topics and challenges that attendees have identified that they would like to see addressed. Topics covered include:

- Creating your elevator speech
- Navigating the ASHRAE organizational structure
- Understanding all the tools and resources available to help Chapters and their members succeed
- Managing effective meetings so that Board meetings and Chapter meetings can run as smoothly as possible
- Delegating to and motivating volunteers towards the ASHRAE mission

NEW! Thanks to generous support from the ASHRAE Foundation, each region can send up to 4 participants. Flight, hotel, food, and class materials are included. Other expenses incurred are at the expense of the region, chapter, or individual.

Notify your DRC or RMCR by October 11th if you are interested in participating.

Legislative Efforts in Helsinki for a Healthy and Sustainable Built Environment



Government Affairs Committee

Helsinki, the vibrant capital of Finland, is at the forefront of legislative efforts to create a healthy and sustainable built environment for all its residents. The city's commitment to sustainability is evident in its comprehensive approach to urban planning, construction, and environmental protection. This article delves into the recent legislative measures and initiatives that are shaping Helsinki's built environment, ensuring it is both sustainable and inclusive.

Legislative Framework and Goals

The Finnish government has introduced several legislative proposals aimed at reducing emissions from buildings and promoting digitalization in the construction sector. One of the key legislative changes is the new Building Act, which came into force on January 1, 2024. This Act incorporates climate change mitigation and adaptation into building regulations for the first time, setting new technical requirements for low-carbon buildings and their life cycles¹. The Act also mandates the use of digital tools to enhance smart building and land use, ensuring that building permits and land use plans are machine-readable and interoperable¹.

Sustainable Development Goals

Helsinki's commitment to sustainability is further highlighted in its Voluntary Local Review, which examines the city's progress

in implementing the UN Sustainable Development Goals (SDGs). The review emphasizes the importance of ecological, social, economic, and cultural sustainability. It identifies key areas for improvement, such as reducing per capita carbon emissions and natural resource consumption². The city has made significant strides in promoting sustainable development through various initiatives, including the KETTU model for early childhood education and the development of a sustainable development learning path².

Environmental Protection and Biodiversity

In addition to legislative measures, Helsinki has set ambitious environmental protection targets. The city aims to halt the loss of biodiversity by 2030 and increase the area of natural preserves on land and at sea to at least 10% by 2040³. Soil protection is also a critical consideration in all land use decisions, ensuring that urban development does not come at the expense of the natural environment³.

Challenges and Opportunities

Despite these efforts, Helsinki faces several challenges in achieving its sustainability goals. The city's growth often conflicts with the need to protect local nature and biodiversity. Balancing urban development with environmental preservation requires continuous long-term work and innovative solutions. The legislative framework

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Legislative Efforts in Helsinki for a Healthy and Sustainable Built Environment

provides a solid foundation, but the successful implementation of these laws depends on the collaboration between public officials, stakeholders, and the community.

Conclusion

Helsinki's legislative efforts to create a healthy and sustainable built environment are a testament to the city's dedication to sustainability and inclusivity. By integrating climate change mitigation into building regulations, promoting digitalization, and setting ambitious environmental protection targets, Helsinki is paving the way for a greener future. However, the journey towards sus-

tainability is ongoing, and it requires the collective effort of all stakeholders to overcome challenges and seize opportunities. The city's proactive approach serves as a model for other urban centers striving to achieve a sustainable built environment for all.

- 1: Government's legislative proposals to Parliament aim to reduce emissions from building and promote digitalization
- 2: Successes and sustainability challenges – Helsinki's new Voluntary Local Review
- 3: City of Helsinki decides on ambitious environmental protection targets

Exploring career opportunities with the ASHRAE job board

The ASHRAE Job Board is a premier platform for professionals in the fields of heating, ventilation, air conditioning, and refrigeration (HVAC&R). Whether you are an engineer seeking new opportunities or an employer looking for top talent, the ASHRAE Job Board offers a comprehensive and user-friendly experience.

For Job Seekers

Personalized Job Search: The ASHRAE Job Board allows engineers to create personal accounts to manage their job searches efficiently. Users can upload resumes, set up job alerts, and apply for positions directly through the platform.

Diverse Opportunities: The job board features a wide range of positions, from entry-level roles to senior management positions, across various specializations such as mechanical, electrical, and civil engineering. Recent listings include roles like HVAC Sales Engineer, Building Automation Systems Engineer, and Senior Commissioning Project Engineer.

Career Resources: Beyond job listings, the ASHRAE Job Board provides valuable re-

sources to help job seekers enhance their careers. This includes resume writing tips, interview preparation guides, and access to career coaching services¹.

For Employers

Efficient Recruitment: Employers can set up corporate accounts to post job openings, review resumes, and manage their recruitment processes. The platform is designed to connect employers with highly qualified candidates in the HVAC&R industry¹.

Targeted Listings: By posting on the ASHRAE Job Board, employers can reach a niche audience of professionals who are specifically interested in HVAC&R careers. This targeted approach ensures that job postings attract the most relevant candidates¹.

Comprehensive Support: The job board offers various tools and services to assist employers in their recruitment efforts, including job posting packages and access to a database of resumes.

Visit: <https://jobs.ashrae.org/>

GroupPay

The GroupPay program is designed to allow for an easy payment from a single invoice for all employees within an organization. Memberships are still individual to the employee and cannot be transferred within the organization. A primary contact at the organization must be identified and will have access to a special online portal to view employee members and select which ones they wish to be invoiced for. If employees have left the organization, the primary contact can remove them from the list.

The Primary Contact can view the annual complimentary selected benefit for their employees.

Chapter dues may be paid alongside Society dues for the group or left up to the individual to pay directly to the Chapter.

The Organization can benefit from 10% off the full dues rate when 5 or more employees join as a new member at once. Current dues rate will be charged for renewals.

Email GroupPay@ashrae.org to get started.

About

ASHRAE Nordic Chapter is a local branch of ASHRAE, a global society founded in 1894. ASHRAE's mission is to advance human well-being through sustainable technology for the built environment. With more than 50,000 members from over 132 nations, ASHRAE is an engineering organization dedicated to advancing the arts and sciences of heating, ventilation, air conditioning and refrigeration to serve humanity and promote a sustainable world. The organization contributes to shaping tomorrow's built environment through research, standards writing, publishing, certification, and continuing education. The geographic area covered by ASHRAE Nordic Chapter is Denmark (Faroe Islands and Greenland), Iceland, Norway, Finland (Åland), and Sweden.

Inaugural Chapter Meeting

Join us for the inaugural meeting of the ASHRAE Nordic Chapter, marking a significant milestone in our region's commitment to advancing HVAC&R technologies and practices. This meeting will bring together professionals from across the Nordic countries to discuss the chapter's mission, goals, and upcoming initiatives. Attendees will have the chance to meet the newly appointed chapter officers, and contribute to shaping the future direction of the chapter. This foundational meeting is an excellent occasion to connect with peers, exchange ideas, and lay the groundwork for a vibrant and impactful ASHRAE community in the Nordic region.

Monday, 18 November 2024, in the afternoon

Sortemosevej 19, Allerød 3450, Denmark

EARLY BIRD - 2025 ASHRAE Winter Conference Student Program



A special program for students will take place at the 2025 Winter Conference. Events and activities include an awards ceremony, mixer, technical talks, student round table and a tour. Students are also encouraged to attend recommended technical sessions throughout the conference.

Register: <https://www.ashrae.org/>

[conferences/2025-winter-conference-orlando/2025-winter-conference-registration](https://www.ashrae.org/conferences/2025-winter-conference-orlando/2025-winter-conference-registration)

For more information visit: <https://www.ashrae.org/conferences/2025-winter-conference-orlando/2025-winter-conference-student-program>

Upcoming events

Date	Type of event	Location	Event
Nov. 18	Physical	Denmark	Inauguration Chapter Meeting, 2024-25 ASHRAE President M. Dennis Knight
Feb. 25	Physical	Sweden	Field Trip
Mar 25	Physical	Denmark	Field Trip
June 25	Virtual		University Research

Next Chapter Meetings

November 18, 2024 — Presential (Denmark) - Inaugural Chapter Meeting

December 2024—Virtual

February 2025—Presential (Sweden)

April 2025 — Virtual

May 2025 — Presential (Norway) Annual Chapter Meeting

Visit:
www.linkedin.com/company/ashrae-nordic

