



DAYTON CHAPTER

WWW.DAYTONASHRAE.ORG

ISSUE XII | 2023

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December 11th In person

**Main Presentation: How to Properly Specify
and Design Plate and Frame Heat Exchangers**

**Presenter: Tracey Putnam, Commercial
Markets Sales Manager for Alfa Laval**



**Social Hour: 11:30-11:55 am : Chapter Business: 11:55-Noon
Lunch & Main Presentation: Noon**

**Presentation will be at: Top of the Market—32 Webster St, Dayton
Theme: Student Join Mtg with MCA/SMACNA
(Non-members are \$25) 1 PDH Credit**

Topic of Discussion:

Designing a plate and frame heat exchanger is not as straightforward as it may seem. We all understand the principles of heat transfer, however fluid mechanics play a very large role in the performance and uptime of a heat exchanger. An improperly designed heat exchanger will cause other equipment to work harder and increase the energy consumption in the HVAC system - we must learn to look beyond the initial capital investment and consider the total cost of ownership. AHRI has helped to standardize manufacturers' designs but there are parameters that engineers must still consider and verify. In today's presentation we will discuss:

- Basic heat transfer theory
- The effects of temperature approach on the size and cost of a heat exchanger
- Hydraulic design and its effect on performance, fouling and total cost of ownership
- AHRI – what it is and when it's applicable

Please use the Eventbrite link to **sign up by December 7th.** Please register if you plan to attend.

Eventbrite Link:

<https://www.eventbrite.com/e/dayton-ashrae-chapter-meeting-tickets-760637626617?aff=oddtcreator>

FROM THE PRESIDENT

I appreciate all of you who came to see Ginger (Society President) for the November meeting. It was great to get to know her and about her Challenge to Tackle the Climate Crisis.

We are still looking for some young adult to become our next YEA (Young Engineers Association) Chair! We also have a spot open for Membership Promotion Chair if you are at all interested please contact me or someone else on the board

I look forward to seeing all of you at the Holiday Party scheduled for Jan/Feb of next year. We hope of offer a wonderful night to celebrate each other.

As we close out the calendar year, I wish you all a safe and happy holiday and a successful new year.

Warm Regards,
Jennifer Eller
President, Dayton ASHRAE

Upcoming Events

Dec. 11th
ASHRAE Chapter Mtg.
11:30 AM, Meeting

Dec 13th
Board of Governors
8:00 AM, Hybrid

Jan 17th
Board of Governors
8:00 AM, Virtual

Feb 12th
ASHRAE Chapter Mtg.
11:30 AM, Meeting

[See Additional
Events & Volunteer
Opportunities Here](#)

CHAPTER HISTORY (1968-1969)

President:	Norman Pleimann	Hughes Bechtol
Vice Pres:	Thomas Ferdelman	Ahart & Assoc.
Secretary:	Glenn Black	Johnson Service
Treasurer:	Richard Pearson	Heapy & Associates
BOD:	Gifford Solem	Johnson Service

Education:
Research Pro.:
Membership:

*Meetings held at the Dayton Engineers Club
CRC held in Cleveland
Regional Director: Bob Greenwoald*

Committee Chairs

MEMBERSHIP

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YEA (Chair)

Board of Governors

Rick Pavlak

Heapy

Lorraine Kapka

Sinclair College

Brian Turner

Elitaire

MEMBERSHIP

New Members

The Dayton Chapter is happy to welcome its newest members. If you see them please give them a warm welcome!



November:

Dan Fink & Dylan Goetz

Do you know a colleague that would benefit from joining ASHRAE?

You can go to http://web.ashrae.org/connect_a_colleague/ and quickly sign up for ASHRAE to send an email to ask them to sign up on your behalf.

Membership Recognition

We would like to recognize the following members who have been with ASHRAE for the following years! Thank you for all your contributions to the field!

15 Years: Jason Brown



Membership Promotion Committee

Looking for a way to get involved with your local ASHRAE chapter and meet new people? The membership promotion committee is looking for volunteers to join the committee. The committee's primary responsibility is to recruit new members and retain existing members. If you are interested in serving please contact **Vincent Caudill** at vcaudill@ecomfortohio.com or by calling 740-971-7795.

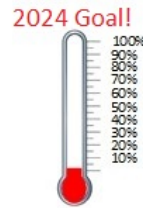
[Membership Application Here](#)

ASHRAE RP

Happy Holidays from the Dayton ASHRAE RP team! As the end of the calendar year approaches, we would like to thank everyone who contributed to Dayton ASHRAE RP in 2023. For those still interested, please consider donating to ASHRAE RP / Education / Scholarships. See the link BELOW to donate today!

Please note again that in order to be recognized with a commemorative coin, and have your name published in the ASHRAE Journal, the minimum donation is \$150 for individuals and \$500 for Corporate Donors .

2022 Goal = \$ 19,680
YTD = \$ 2,100
To go = \$ 17,580



% to 2023-24 GOAL: 11%

Partner Level

Honor Roll

Bronze Level

Lorraine Kapka
Steven Meier
Brian Turner
Bryan Schenck
Evan Nutt
Rick Pavlak
Matt Dill
Jennifer Eller
Kevin Sturm
Jennifer Butsch

Silver Level

Honorable Mention

Mark Mehicic

Thanks for all your help and support. If you would like to donate **NOW** simply click this link:

DONATE NOW

And make your donation to help ASHRAE in its Research Efforts. Thank you so much!!



ASHRAE News

The Dayton Chapter looking for a Young adult to fill the position Of YEA (Young Engineers) Chair position.



Shaping Tomorrow's
Built Environment Today

Please make sure to let us know
If you are willing to help our and
Share your ideas to help
Shape the world of HVAC-R!

You can email Jennifer Eller at
jmeller@heapy.com

Successful Partnerships with School Districts and Industry Practitioners Webinar

On Thursday, November 16, the U.S. Department of Energy will be hosting a webinar focused on successful partnerships between schools and industry practitioners that support addressing indoor air quality (IAQ) and energy challenges that schools are facing. This webinar will cover multiple subjects related to this issue including lessons learned and opportunities available for schools.

To register for this webinar, please use this link: [Register today for the November 16th webinar to learn about the power of partnerships.](#)

ASHRAE Job Board

Mechanical Design Engineer AMETEK; Peabody, Mass.

Facilities Electrical Engineer Lockheed Martin Space; Littleton, Colo.

Senior Mechanical Engineer University of Michigan; Ann Arbor, Mich.

Project Engineer UR Energy; Lost Creek, Wyo.

Functional Neurosurgery Bioengineer Kaiser Permanente; Redwood City, Calif.

Electrical Engineering Intern Johnson & Johnson; Santa Clara, Calif.

Power & HVAC Mechanic United Rentals; Manassas, Va.

Assistant/Associate Professor of Electrical Engineering Lawrence Technological University (LTU); Southfield, Mich.

Sr. Electrical Design Engineer Nextracker; Fremont, Calif.

HVAC Lead Installer Elephant Energy; Denver, Colo.

[View All](#)

\$30 million Funding Opportunity for Building Decarbonization

On November 6, the U.S. Department of Energy Building Technology Office announced a funding opportunity entitled, “Building Energy Efficiency Frontiers & Innovation Technologies” (BENEFIT). Funds of up to \$30 million are available across nine topic areas with the potential to significantly advance building decarbonization. This funding stream has been used since 2014 to spur innovation in the built environment. The goal of this funding project is for technology developed through BENEFIT to advance the nation’s building decarbonization efforts by enhancing the HVAC industry, lowering the cost of energy retrofits, and increasing building resilience. You can read a full list of the nine fundable topic areas, and learn how to apply for the 2024 BENEFIT funding [here](#). Applicants must submit a concept paper by **5 p.m. ET on December 18, 2023**, to be eligible to submit a full application.

Hotel Marcel New Haven Becomes First Certified Passive House Hotel in U.S.

When architect and developer Bruce Redman Becker envisioned the opportunity to create Hotel Marcel New Haven, Tapestry Collection by Hilton (Conn.), he wanted to create a hotel that operated fully on renewable energy, without any use of fossil fuels. That vision is now a reality as Hotel Marcel in New Haven, Connecticut, has become the first Passive House-certified hotel in the country. The redesign included a holistic approach to sustainable design and operations, from its power-over-ethernet lighting system that reduced lighting energy use by more than 30% to its more than 1,000 solar panels that power the guestrooms, kitchen, laundry facilities and 7,000 ft² meeting space. [Read more](#)

UCLA Researchers Develop Solid-State Thermal Transistor for Better Heat Management

A team of researchers from UCLA has unveiled a first-of-its-kind stable and fully solid-state thermal transistor that uses an electric field to control a semiconductor device’s heat movement. *Science* magazine published the group’s study, detailing how the device works and its potential applications. With top speed and performance, the transistor could open new frontiers in heat management of computer chips through an atomic-level design and molecular engineering. The advance could also further the understanding of how heat is regulated in the human body. [Read more](#)

Decarbonization Scenarios of Accelerating Zero-Emission Vehicle Adoption

The rapid adoption of zero-emission electric vehicles will move the nation close to an 80% or more drop in transportation greenhouse gas emissions by 2050 from the 2019 level according to researchers from the U.S. Department of Energy’s National Renewable Energy Laboratory. The researchers came to that conclusion after running thousands of computer simulations on the steps needed to decarbonize passenger and freight travel, which make up the largest contributor to greenhouse gases. While they advised that “no single technology, policy, or behavioral change” is enough by itself to reach the target, eliminating tailpipe emissions would be a major factor. [Read more](#)

Heat Pumps are Hot, but Commercial Retrofits Face Cold Realities

Heat pumps are gaining recognition across many parts of the U.S. for their energy efficiency and reduced greenhouse gas emissions compared to other heating and cooling options. The U.S. Climate Alliance recently pledged to [increase heat pump installations](#) across their states to reach 20 million by 2030. Facilities managers looking to deploy heat pumps in existing buildings are finding that cost concerns along with the significant work and disruption involved in a retrofit pose challenges. [Read more](#)

ASHRAE News

Increasing Ventilation In 1980s High-Rise Office Commercial Buildings

By Jamie Kono, P.E., Associate Member ASHRAE; Jim Gieselman, P.E., [BEAP](#), Member ASHRAE; Meghan Kara McNulty, P.E., Member ASHRAE; Barry Abramson, P.E., [BEAP](#), Life Member ASHRAE

Building ventilation rates have experienced an increase in public interest, fueled in part by COVID-19. But many commercial office buildings designed between 1981 and 1992 still lack sufficient ventilation. This article offers options for updating these building ventilation systems, including upsizing existing equipment and splitting building configurations into high-rise and low-rise systems. [Download here](#)

ASHRAE Releases Guide on the Role of Grid Interactivity in Decarbonization

ASHRAE has released a new guide focusing on the critical role of grid interactivity in the decarbonization process. The [Grid-Interactive Buildings for Decarbonization: Design and Operation Resource Guide](#) is the second in a series of guides developed by the [ASHRAE Task Force For Building Decarbonization \(TFBD\)](#) and provides information on maximizing carbon reduction through buildings' interaction with the electric power grid. [Read more](#)

Improving HVAC Sustainability and Performance: Avoiding Wet & Moldy AHUs in Critical-Care Facilities

By David Schurk, Life Member ASHRAE

Engineering controls outlined in this article are intended to positively impact both the performance and hygiene of air-handling systems by improving a building's indoor air quality, helping protect exposed occupants from airborne and surface source contaminants and improving building sustainability. [Read more](#)

ASHRAE HQ Recognized: Planet Positive Award

METROPOLIS's Planet Positive Awards recognizes the most creative projects and products from around the world that benefit people and planet, as well as firms and professionals leading the way to a better built environment. Judged by four expert juries across project types and product categories, the winners and honorable mentions below represent the highest achievements today in design that addresses climate change, ecosystem health, human health and equity. For their work on the ASHRAE Net Zero Headquarters, Houser Walker Architecture is a 2023 Planet Positive Awards honorable mention recipient. [Read more](#)

Decarbonizing the Future: 2023 Decarbonization Conference for the Built Environment

In October, HVAC&R industry stakeholders gathered for the 2023 Decarbonization Conference for the Built Environment in Washington, D.C., where thought leaders, consulting engineers, architects and others gathered to discuss the prospective, exciting opportunities in reducing the carbon footprint of buildings. [Read more](#)

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ASHRAE News

ASHRAE **2024 ASHRAE WINTER CONFERENCE**
CHICAGO, JAN 20-24 | AHR EXPO, JAN 22-24

ASHRAE **CHICAGO**
2024 WINTER CONFERENCE AND AHR EXPO

Preliminary Technical Program Just Released

Connect with peers, industry experts and the latest innovative technology at the [2024 ASHRAE Winter Conference and AHR Expo](#).

Browse the newly released technical program of carefully selected panels, debates, workshops, forums, seminars, and paper sessions from over 300 leading experts.

[Browse the Program](#)

[Register](#)

P.S.

Get your boss on board by using one of our email templates on the registration page. [Learn more and register here >](#)

ASHRAE Endorsed Conferences & Events

