



January 2022

Alaska Chapter Newsletter Hot Gas Bypass

ASHRAE Monthly Meeting Information

Presentation:

Cold Climate Design for VRF Systems

By: Mike Hudson

Date:
Thursday, January 20, 2022

Time:
12:00 pm

Cost:
Free

Location:
GoTo Meeting Online

<https://www.gotomeet.me/ashraek>

Phone: 1-872-240-3412
Access Code: 264-465-621

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President's Message:

Hello ASHRAE Alaska Members,

Happy New Year! Happy January!

Equation of the month is, For ventilation systems having natural infiltration, Humidity Load in lb water/h, $H = pVR (W_i - W_o) - S - L$, where p = density of air at sea level, lb/ft³, V = Volume of space to be humidified, ft³, R = Infiltration Rate, air changes per hour, W_i = humidity ratio at indoor design conditions, W_o = humidity ratio at outdoor design conditions, lb water/lb dry air, S = contribution of internal moisture sources, lb of water/h, L = other moisture losses, lb of water/hr. ASHRAE HVAC systems and equipment 22.5.1.2.3. James. R Luck and L.W. Nelson in 1977 conducted a study on the indoor heating and cooling systems and found a correlation between infiltration and indoor relative humidity. Their finding was there is significant energy saving from increasing the indoor relative humidity, which reduced infiltration of outdoor air by up to 50% during the heating season. Interestingly the reduction was due to the sealing of window cracks by frost formation. During cold dry months maintaining indoor humidity at reasonable level is critical. It depends on infiltration as well as internal moisture gains and other factors mentioned above.

Moving on to January meeting on Thursday Jan 20 at Noon via go to meeting, Our speaker for January is Mike Hudson with Daikin speaking on VRF for Northern Climates. Mike is knowledgeable in commercial variable refrigeration systems for colder climates. Stay tuned for February, we have a ASHRAE Distinguished Lecturer, more details to follow. We also have the board elections coming up in February. If you would like to volunteer, please let any of us know.

Engineering Week 2022 is coming up next month February 20-26. Volunteers are needed in different capacities, so please consider giving some of your time to support E-Week. Similar to last year you can do a virtual classroom presentation or help with the in person student competitions planning to be held at Loussac Library. Companies are also encouraged to create a display about projects, services, and other efforts to help educate the public about the important contributions of engineers to Alaskan Communities. Please contact us for more information. We will keep you posted on information as we receive.

Thanks for attending the December YEA Bootcamp series with our speaker Mak Kampen, P.E. Stay tuned for Our next speaker in January. Please encourage engineers in your firm to attend the YEA Bootcamp series.

Thanks to all the volunteers, members, and pioneers. Stay warm!

Sincerely,

Sam Ratnasigamani,
President 2021-2022
Alaska Chapter ASHRAE
samr@rsa-ak.com



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Cold Climate Design for Variable Refrigerant Systems

This month we are please to have Mike Hudson present on “Cold Climate Design for Variable Refrigerant Systems”

Summary:

The presentation will be going over VRF cold climate design practices, including using VRF in heating applications in places with winter conditions like Alaska. Topics will include proper outdoor heat pump installations and recommendations, supplemental heat strategies, installation examples, and an explanation of the new technologies that are being used inside of the air-cooled heat pumps that allow heating in ambient temperatures down to -22F.



Speaker's Bio

Mike Hudson is a highly technical sales driven HVACR Specialist with 25 years of industry experience in Sales, Product and Project Management. Mike specializes in high efficient and cutting edge HVACR Technologies including VRV, Ductless, Water Source and Hyrdonic, and is dedicated to learning and sharing the intricacies of the application and function of these Applied System solutions. Mike was first introduced to VRV technology 17 years ago, and though familiar with Ductless systems, Mike was fascinated by the possibilities VRV held. Mike has dedicated countless hours to learning VRV and Ductless technologies with an emphasis on controls and proper application, while solely focusing on these technologies for over a decade. Mike would say that VRV and Ductless are second languages and he loves to speak them.



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New Year, New YEA Bootcamp presentations!

Our first YEA Bootcamp presentation of 2022 will be February 3rd and will be given by **Scott Bohne, AIA**.

Yes, you read that right. And yes, it is THAT Scott Bohne, Principal Architect from RIM Architects!

You may be wondering, why is an architect giving a presentation on how to succeed as a mechanical engineer? **BECAUSE HE'S YOUR CLIENT!** Who better to learn what architects want from their engineers... than an architect!

Mr. Bohne has been an Architect in Alaska for over 40 years and knows a lot about how to win proposals, deliver successful projects, communicate with clients, and lead a team of young professionals. Those of you who have seen one of the YEA presentations know firsthand that most of what is taught is not limited to mechanical engineering but is beneficial to all young (and old) professionals regardless of their branch of engineering (and architecture, and interior design, and pretty much all human beings).

Those of you who have had the pleasure of working with Mr. Bohne know that this is going to be a fun and educational experience. Truth wrapped in laughter!

We are looking for organizations to sponsor the lunches for 2022. We normally have about 10-15 people attend in person, so it is not a significant sponsor cost (about \$250). Your company will be recognized in the presentation for your generosity.

As with the previous sessions, the training will be given both in person at the MOA Permit Services and online via GoToMeeting.

Time: February 4th, 11:30 AM-1:00 PM (Alaska).

In-person Training Location:

Municipality of Anchorage Development (Permit) Services
Main Training Room
4700 Elmore Road

*If you are going to attend in person, please RSVP through the Chapter website at <https://ashraealaska.com/yea-bootcamp> or email Craig Fredeen at cfredeen@coldeng.com so that we may order an appropriate amount of lunch for in-person attendees.

The GoToMeeting sign-in link: <https://global.gotomeeting.com/join/495357373>
Access Code: 495-357-373

You can also dial in using your phone at [+1 \(571\) 317-3122](tel:+15713173122)

We now have four presentations on the ASHRAE Alaska YEA Bootcamp webpage! Be sure to let your coworkers know about these presentations. Tons of great Best Practices and Life Lessons are available there.

Happy (Belated) New Year!

Craig Fredeen

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