



NAC Message

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What do we value?

Safety

Safe environments through planning and execution.

Customers

Develop exceptional partnerships through customer-first philosophy.

Integrity

Fair, honest and truthful to each customer, each employee and to the community as a whole.

Quality

Best-in-class results, driven by decades of experience.

Innovation

Utilize latest technologies to maximize building safety and efficiencies.

Single-Source

Put all your needs in the industry's most capable hands with NAC's full service capabilities.

A Message From Lynn

Wow! Have times changed since the last time I wrote to you in the newsletter. Dealing with changes and unknowns is an almost everyday event for NAC employees, family and friends. NAC is a company operating a business that is specified as essential to society, particularly our customers, during this pandemic.

Please keep in mind, that although our industry is not mentioned as front-line in the media, NAC and its employees keep critical businesses and public services operating. This includes everything from healthcare, long term care, food shelves and facilities that support our communities, first responders, data centers, pharmacies and everything in between. I am proud every day of the employees that work for NAC and keep all these buildings running safely, securely and comfortably. It takes all employees working together to make this happen.

So a big thanks to all of you, be proud and keep up the great work!

-Lynn Bishop

Our Mission

To deliver Total Building Solutions that operate efficiently, are sustainable and make environments safe, secure and comfortable.

Our Vision

To provide solutions by understanding customer needs, leveraging technologies, maximizing efficiencies, building trusted relationships and empowering employees success.

Kwik Trip Gas Cards

NAC is excited to announce that we have partnered with Kwik Trip Gas stations and introduced Kwik Trip MasterCard's for fuel and vehicle related items. NAC made this change for several reasons. One of them being Kwik Trip is supporting NAC, a union shop, with work on their remodeling projects and utilizing NAC for service work. Although they are not using NAC exclusively, our sales and field teams are working on securing upcoming projects with Kwik Trip. Secondly, Kwik Trip has offered NAC discounts on gas and carwashes. Please use Kwik Trip stores whenever possible.

New Kwik Trip cards have been issued to the drivers and will not stay with the vehicles. Cards can be used anywhere for fuel that accepts MasterCard, but again, please use Kwik Trip when possible.

Use <https://www.kwiktrip.com/locator> or download the Kwik Trip App in the Apple App Store or Google Play.

Your gas card pin number is the last four of your cell phone number. If the last 4 digits start with a zero, then add a one in the front.

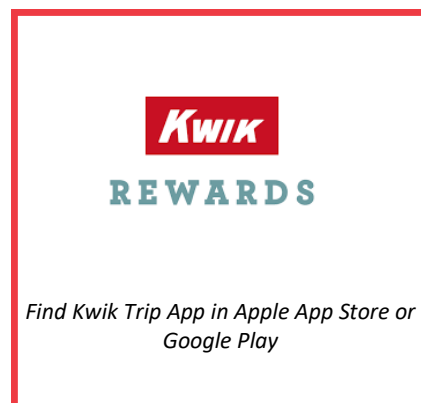
Example— 999-999-0999 Pin #- 10999

999-999-999 Pin #9999

For any additional questions regarding your Kwik Trip gas card, please reach out to Casey Irish, cirish@nac-hvac.com, 651-402-2052



Visit our website at: www.kwiktrip.com for more details!



Please support Kwik Trip when able as they support NAC employees by utilizing our offerings

2020 Alerton Platinum Dealer & President's Club Awardee!

We are honored to be selected as a 2020 Alerton Platinum Dealer! This award marks the 4th consecutive year for NAC and 8th overall total Platinum status. Only 16 dealers worldwide achieved this status for 2020. To receive this honor, Alerton assesses performance metrics, including volume and growth along with other dimensions.

NAC is grateful to be the **only dealer in our area** to have Platinum dealer status and we would like to thank our employees for their dedication and support to our clients and their needs. To understand the magnitude of this honor, **only 10 % of dealers in the world receive this award.**



We were also named to the Alerton 2020 President's Club. To achieve this status, NAC had sales of over \$1,000,000 in 2019 of Alerton materials.

Thank you for trusting us with your building's automation needs!

NAC New Hires

Since December, NAC has hired the following employees. Please introduce yourself if you see a new face & welcome to our Team!

- ◆ *Angie Perrin - Accounts Payable*
- ◆ *Ashley Schwintek - Accounts Payable*
- ◆ *Daniel Thompson - Tech Sales Eng*
- ◆ *Derek Whitcomb - Electrical PM*
- ◆ *Elliot Niesl - Account Mgr*
- ◆ *Gregory St. Arnault - Accts Receivable*
- ◆ *Kong Yang - Software Application Eng*
- ◆ *Melissa Goebel - Marketing Mgr*
- ◆ *Mohamed Elkhailifa- Software App Eng*
- ◆ *Zachary Schiller - Software App Eng*

NAC New Hires Cont..

- ◆ *Heather Flood - Office Administrator*
- ◆ *Clayton Beehler - Software App Eng*
- ◆ *Joel Slaney - Truck Driver/Warehouse*
- ◆ *Ryan Townsend - Software App Eng*

Follow us on Social Media!



@NACMechanicalElectricalServices



@NAC_Mechanical



@NAC_Mechanical



/NAC-Mechanical-&-Electrical-Services

Project Spotlight

Dorothy Day Place

Project: Dorothy Day Place '17

Location: Saint Paul, MN

Final construction cost: \$10,000,000

General Contractor: Watson-Forsberg

Architect: Cermak Rhoades Architects

Engineer: Emanuelson-Podas

Date completed: September, 2019

NAC Project Manager: Mike Biebel

BIM Integrator: Ben Nussbaum

NAC Field Superintendent:

Brad Cran - Plumbing
Travis Hodgdon - Pipefitter
Dean Lane - Sheet Metal

NAC Technologies:

Erik Edson - Project Manager
Troy Sperl - Technician
Matt Nicholls - Applications Engineer



Project Scope

Catholic Charities constructed Dorothy Day Place on the site of the original Dorothy Day Center. The new six story 170,000 square foot B3 building serves as an integrated, one-stop location to connect people with critical services to improve their health, income, housing stability and well-being. The building includes 177 permanent housing units, improving accessibility to the community partners, full kitchens and laundry, and medical services housed below in the Opportunity Center.

NAC's HVAC piping, plumbing, controls and sheet metal divisions utilized our in-house BIM coordination team for clash detection and trimble to reduce errors and aide in layout early on in the process. Pre-fabricating materials at our fabrication facility, improved quality assurance and expedited field install in the post-tension cable building. Utilizing chilled beams, DOAS units, conventional VAV's and district energy, this B3 building provides a sustainable environment for future residents of the building.

The project was constructed over 2 years. Over 100 NAC employees from multiple divisions and disciplines contributed to this project. The following is a rough breakdown of project participation:

Logistics: 1,000 hours
Technology: 4,000 hours
BIM: 5,000 hours
Tinnars: 11,000 hours
Fitters: 12,000 hours
Plumbers: 18,000 hours

The building is controlled and monitored with an Alerton Compass Building Automation System (BAS) containing over 2,500 points and 150 field level devices. The Alerton BAS also includes over 200 6-way control valves, utility metering and dehumidification control of the chilled beam system; providing optimal building efficiency and comfort.

Thank you to all who made this project a success!



Employee Spotlight

Stephanie Hagen has been with NAC for almost 4 years. She has a B.S in Environmental Science, Policy and Management degree from the University of Minnesota-Twin Cities and a Masters in Environmental Health & Safety from the University of Minnesota– Duluth. Stephanie also has GSP (Graduate Safety Practitioner) credentials.

Stephanie's job consists of working to keep employees safe so they can go home healthy, every day. Each day is different, which she loves! Some of the main things you will see her doing are inspecting jobsites, assessing hazards and risks, creating safe work procedures, writing programs based on regulatory and industry standards, conducting safety trainings, maintaining the safety website, Toolbox Talk emails and investigating incidents and injuries.

The most rewarding part of the job for Stephanie is getting to know and work with so many great people and being able to see all kinds of different projects and places. She loves seeing how each person brings their own unique perspective and skills to help find solutions for each customer.

Most misunderstood part of her job? People often think she works for OSHA when she tells them she is in safety, but OSHA regulations are only a starting point. Many of our safe work practices go well beyond OSHA's regulations

Hobbies: She is an oil painter and prefers to paint portraits from life such as art, science, traveling, gardening, cooking, baking and eating

Fun Fact: She has been a florist for 18 years and still arranges flowers for weddings

Congratulations!

Stephanie had her first child, Soren, on February 16th, 2020. He weighed 7 lbs 2 oz & 20 1/2" long



Stephanie is currently out on Maternity Leave until early May



Tips on Economizers

Tech Basics: The Role of Economizers In Rooftop Equipment

SOURCE: The ACHR News Published: February 26, 2004

In the HVACR industry, the economizer is often misunderstood. Although some technicians are unsure of its operation and many customers have no clue it is even there - much less what it does - the economizer continues to fight a lonely battle for recognition as it saves building owners money on utility bills. Today, we will shed light on what an economizer actually is, describe the various types of economizers and outline the benefits an economizer can provide for building owners and technicians.

The Term Defined

Economizer - The device is built in or retrofitted to rooftop equipment. It allows the unit to use outdoor air for cooling, provided the ambient air is below a certain temperature and the humidity is below a certain percentage. This type of cooling is often referred to as "free cooling" because it cools the building without the use of energy required to run a compressor.



Damper system economizers

(Photo courtesy of Rooftop Systems Inc.)

Demand-Control Ventilation

Economizers can be used to provide ventilation to a building. The demand-control system uses a carbon dioxide sensor located within the building to initiate operation. If carbon dioxide levels rise, and it will as more people enter the space, the economizer opens and allows fresh air to enter for proper ventilation.

Benefits To Building Owners

One of the main reasons to use an economizer is to save money on electricity. The longer outside air can be used for cooling, the longer the compressor can remain off. Another benefit is the economizer actually can extend the life of the equipment - provided the system is maintained properly.

Proper operation is critical for indoor air quality.

Tips on Economizers Continued..

Tech Basics: The Role of Economizers in Rooftop Equipment

Types Of Economizers

Dry Bulb Economizer - This economizer uses a sensor to determine if outdoor air is at or below a certain temperature, usually about 55 degrees F. If the outdoor air temperature is below set point and there is a call for cooling, an actuator opens a damper, allowing the outdoor air to mix with the return air to provide cooling. One problem with this type of system is the outside air could still be low enough in temperature to cool, yet contain too much humidity for creature comfort.

Single Enthalpy Economizer - These use a sensor to determine if the outdoor air contains a low enough amount of humidity to use for cooling. Single enthalpy controls have been known to have problems. Over the years, elements used in these types of sensors sometimes break down, rendering the sensor inaccurate.



Photo courtesy of Rooftop Systems Inc

Differential Enthalpy Economizer - These use two sensors. One measures the return air enthalpy, while the other measures outdoor air enthalpy. Dampers are modulated for optimum and lowest enthalpy to be used for cooling.

Integrated Differential Enthalpy Economizer - These are the same as the differential type except that now the controls can communicate with the indoor multi-stage thermostat. On a call for cooling, provided the temperature and enthalpy of the outdoor air are low enough, first-stage cooling would be the economizer. If outdoor air is not sufficient enough to cool the space, second-stage cooling would come on, initiating the system's compressor.

Technician Opportunities

The economizer is one of the most often neglected components in an HVAC rooftop unit. It can be broken, and as long as the damper is closed, the building owner may never know.

Technicians who understand the economizer's operation can explain to the building owner how it can save them money on utility bills, creating a repair opportunity for themselves and their company.

Over the years, economizer controls and sensors have gone from electromechanical to solid state. In some cases, hybrid variations grew out of rooftop units when various dampers, actuators, linkages, sensors and controls were added over the economizer's life span. When a technician comes upon such a mix-match of components, it is in the customer's best interest to upgrade. Sensors lose their accuracy, dampers do not seal correctly and linkages become sloppy - all costing the building owner in the form of higher utility bills.

The best source for operation and troubleshooting information comes from the manufacturer. Consult *The News'* Web site (www.achrnews.com) and/or *The News'* HVACR Directory & Source Guide for manufacturer contact information.

Proper air changes helps to minimize the spread of viruses.

Economizer Tips

Featured Economizer's

Belimo ZIP Economizer



- Easy-to-read LCD Display
- ZIP Code patented technology
- Plug and play
- Acceptance tests
- Fault Detection and Diagnostics (FDD)
- Onboard information
- Modular design
- Arm notification
- BACnet

For more information on the Belimo ZIP Economizer, click [here](#)

Honeywell JADE Economizer Controller



- LCD screen delivers continuous messages, important diagnostics and system status
- Color-coded wiring terminals help with easy installation
- Built-in freeze protection closes the outdoor dampers to protect coils when temperatures drop
- Two-wire Sylk bus enabled communications enable simple integration and future expansion
- On-board fault detection and diagnostics quickly identifies sensor failures or loss of communication, saving time on service and commissioning

For more information on the Honeywell JADE Economizer, click [here](#)

Recommend to your clients to replace their outdated economizer controls for improved indoor air quality.

Ion Generation

Protect and Provide Lasting Value

Beyond Today's Needs



Reduction of Pathogens



Reduced Particles



Neutralization of Odors



Energy Savings



GPS uses bi-polar ionization products to create a plasma area filled with a high concentration of + and – ions. As these ions travel with the air stream, they attach to particles, pathogens and gas molecules. The ions help to agglomerate fine sub-micron particles, making them filterable and also kills pathogens by robbing them of life-sustaining hydrogen. The ions breakdown harmful VOC's with an electron volt into harmless compounds like O₂, CO₂, N₂, and H₂O. The ions produced travel within the air stream into the occupied spaces, cleaning the air everywhere the ions travel.

Benefits

- ◆ No o-zone generation – UL-2998
- ◆ Approved testing underway for COVID-19 virus variant
- ◆ Ionization kills corona viruses (have tested other variants of Corona viruses with success in the past)
- ◆ Air filtration system captures large particles such as dust, dander, pollen by attaching ions around it, increasing the mass and size, therefore, making the capture rate more effective within your HVAC system
- ◆ Independent testing result - MERV8 + GPS Bi-Polar Ionization product = MERV 13 efficiency without the added pressure drop of a MERV 13 filter bank
- ◆ Removes VOC's, odors, pathogens and ultra-fine particles from the air stream and kills viruses, mold spores and bacteria by eliminating the hydrogen from the pathogens
- ◆ Chemical, pet, cooking and other various odors are broken down into harmless compounds
- ◆ Significantly reduced the amount of outdoor air intake required to operate that can potentially save to 30% less energy
- ◆ GPS can be installed in any air system in any building

NAC would recommend GPS for owners that are interested in preventing the spread of VOC's, viruses and odors in their supply airstream(s) and want a lower first cost solution when compared to UV lights and specialized filter solutions. The initial cost, install and maintenance requirements are attractive for this product considering the number of benefits that the product provides.

Products are readily available for installation in most units and can be ordered with quick ship options for large, custom air handling units.

For solutions, contact NAC at 651-490-9868 or info@nac-hvac.com


Safety Focus

During these uncertain times, it is important to protect yourself and others around you. Please follow the Center for Disease Control's guidelines to help prevent the spread of COVID-19, also known as Coronavirus.


COVID-19

Coronavirus Disease


Preventative Measures – Protect Yourself




Wash hands with soap and water thoroughly and often




Avoid close contact with sick people (those with fever and cough)



Avoid touching eyes, nose, or mouth with unwashed hands



Avoid hugging, kissing, and shaking hands when greeting



Practice good health habits (sleeping, eating, keeping physically active)

Key Facts

What are the signs and symptoms of coronavirus disease 2019 (COVID-19)?
The following symptoms may appear 2-14 days after exposure.

- Fever
- Cough
- Shortness of breath

Reported illnesses have ranged from mild symptoms to severe illness and death. Call your doctor if you develop these symptoms, and have been in close contact with a person known to have COVID-19, or have recently traveled from an area with widespread or ongoing community spread of COVID-19.

How does this coronavirus disease 2019 (COVID-19) spread?
The virus that causes COVID-19 seems to be spreading from person-to-person

- Between people who are in close contact with one another (within about 6 feet).
- Through respiratory droplets produced when an infected person coughs or sneezes.

These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs.

Be Prepared








Clean your hands often

- Wash your hands often with soap and water for at least 20 seconds especially after you have been in a public place, or after blowing your nose, coughing, or sneezing.
- If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol. Cover all surfaces of your hands and rub them together until they feel dry.
- Avoid touching your eyes, nose, and mouth with unwashed hands.

Avoid close contact

- Avoid close contact with people who are sick
- Put distance between yourself and other people if COVID-19 is spreading in your community. This is especially important for people who are at higher risk of getting very sick.

Acquire necessary types of PPE and cleaning supplies.



Mask Respiratory Protective Gear Boots and Shoe Covers Face Shield Disposable Gloves Biohazard Response Kit

If You Get Sick

Prevent the spread of COVID-19 if you are sick, by taking the following steps to protect others

- Stay home if you're sick, except to get medical care
- Separate yourself from other people – and animals – in your home
- Call ahead before visiting your doctor
- Wear a facemask if you are sick
- Cover coughs and sneezes
- Clean your hands often
- Avoid sharing personal household items
- Clean and disinfect all "high-touch" surfaces everyday

Stay Informed

Don't panic – It's important to remain calm and take everyday actions to stay healthy. The following resources are updated regularly as information becomes available:

CDC

Centers for Disease Control and Prevention
1-800-232-4636 | www.cdc.gov

OSHA

Occupational Safety and Health Administration
1-800-321-OSHA | www.osha.gov

WHO

World Health Organization
1-202-974-3000 | www.who.int

+

American Red Cross
1-202-303-5000 | www.redcross.org



This Poster is Available as a Free Download at: Accuform.com/Coronavirus

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