Residential

How Cooling Systems Work

By Brian Hansen, Project Manager

Summer weather gets us all outside to enjoy nature. When the heat gets too high, lots of us can cool off thanks to the clever innovations that resulted in modern air conditioning.

Air conditioning is one of the most important architectural developments in the last 100 years. Can you imagine visiting a mall or movie theater in the summertime where the management relies on open window fans and cross ventilation to control the interior temperature? The factor of interior comfort is a major driving force in the relationships we all have with our buildings so the advent of air conditioning has made buildings possible in sizes, layouts, and locations that would be impossible without it.

Air conditioning as we know it is an offshoot of parallel refrigeration technology concepts that were being developed by multiple inventors in the mid 1800’s. One milestone at that time was the achievement of “Artificial Cooling” with the use of an air compressor (powered by a horse) to create ice for a Florida hospital. Models improved and developed for about 50 years until an engineer named Willis Carrier solved a humidity problem at a print shop in Brooklyn by blowing air across water-filled cooling coils. Carrier pumped water through the coils which forced the temperature of the water to recover as it traveled. At the same time, he designed an automatic control system to regulate the output of his system. Most historians recognize this combination of component as the first commercial air conditioning system.

Read more...

Commercial

Projecting HVAC Equipment Life

By Brian Hansen, Project Manager

Here at Team Engineering we have several services aimed at uncovering crucial information about the condition and fitness of existing buildings. Our Engineered Building Survey (EBS) service is designed to assist commercial real estate owners perform pre-purchase due diligence on investment properties. The EBS is a truncated version of the Property Condition Assessment (ASTM E2018-01). The EBS is designed to deliver information with horsepower, without the expensive lengthy details. We catalog the conditions of the vital building systems and create a projection of the expenses related to keeping and/or replacing those components. Clients come back again and again because we are an engineering company and that lends our clients an advantage. Our knowledge helps our clients better allocate their resources and to achieve positive cashflow faster than they will with any other inspection service.

In January, we assisted a client who was buying a mid-rise commercial building. Each level of the building had its own heating and cooling (HVAC) systems, all approximately 30 years old. The current owner has taken excellent care of the system, even stock-piling spare parts that are only available through Ebay. The buyer readily understood that the system was in good condition, however he had a legitimate concern that the systems age made it exponentially more vulnerable to expensive failures.

The buyer needed good advice.
Project Spotlight

Brian Hansen of Team Engineering has been fully integrated with the ongoing activities of New Horizons for NH. There are several continuous renovations within the well-established homeless shelter, pantry, and soup kitchen in Manchester, NH. This particular renovation involved the public cafeteria and kitchen. With the dining room being aged and weathered, it was finally time for the large public eating and serving space to be updated.

The new space involved increasing the size of the kitchen, installing new electrical, applying new flooring, and painting the faded walls. Several vendors kindly donated their products, including construction materials, kitchen appliances, and furniture. In general, the cafeteria space was gutted so that the new decor could be easily installed. Upon completion, the cafeteria has been praised for its new modern look and is much more functional to those who work and visit at the shelter. A huge credit must also be given to the many charitable volunteers, who this renovation would not have been a success without.

Team Player Spotlight

Brian Ki

My fiance and I have a dog. His name is Russell and he is a very goofy, but lovable English Bulldog. Like similar breeds, he has the usual drooling, snoring, and many high qualities that we all want to introduce into our lives. Russell enjoys getting dirty at the dog park, rolling around in the snow, and his favorite, playing around with a large plastic bucket. He is a very friendly pet. Stranger or not, he will come over, sit directly on your foot, and patiently wait to be pet. Although my fiance and I do not have any kids yet; Russell is the closest we’ve got, and he fills our lives with so much fun.

Standard Details

Holes and Notches in your Studs, Beams and Joists

By Dan Martel

We all have them in our homes: holes drilled in our wood studs, joists, and beams to pass through electrical wiring or HVAC ducts. And sometimes you need to notch that stud just so to fit your new plumbing pipes. Not only is it standard construction practice to alter studs and beams to allow for wires and pipes, but it is actually permitted by the International Residential Code (IRC), the code governing residential construction in most states, New Hampshire and Massachusetts included.

Some holes or notches may look worse than they are, but some may have more of an adverse impact on the structure of your home than it appears. The IRC provides limits, and we developed Standard Details to help you know if the size and location of the notches and holes are acceptable. So before you (or your plumber or your
electrician) start drilling your studs, beam or joists, take a look. And if you’re not sure if your stud wall is load bearing or just a partition, give us a call and we can help!

These are just two of the dozens of **Standard Details** Team Engineering has developed visualizing the IRC and showing good construction practices. Stay tuned, as we are constantly developing more!

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**Charitable Giving**

**Easterseals New Hampshire**

Easterseals provides hands-on, comprehensive, vital programs and support to help people reach their full potential—regardless of challenges, needs or disabilities. Easterseals NH services include autism services, inclusive child care and early intervention, special education, medical rehabilitation, camping and recreation, vocational services, senior services, substance abuse services, adult day programs, community based services, individual service options, transportation services, residential service options, dental services and veteran services. Our mission is to spread help, hope & answers. Easterseals NH is here to change the way the world defines and views disability by making a profound, positive difference in people’s lives every day.

Team Engineering has proudly donated $150 this month to **Easterseals NH**.

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**What’s happening with Turbo**
Turbo modeling his new Team Engineering agility leash.