

The Monroe Igniter

April 2011

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ENGINEERING THE FUTURE

Matt Schneider

As many of you know, Engineering Services have been the cornerstone of Monroe Equipment since our inception. We pride ourselves on maintaining a complete array of engineering services at the same time as many of our competitors are dismantling their engineering teams.

Staying true to Randy's desire to improve and grow ALL of our customer service departments, we are pleased to announce the return of Ben Lane. Ben began his career at Monroe Equipment in 2001 as a designer and draftsman in our engineering department. He obtained a Wisconsin HVAC Designers Stamp in 2007. We were unfortunate enough to lose Ben to Henneman Engineering, a consultant engineering firm located in Brookfield, in 2008. I continued to stay in contact with Ben while he was at Henneman and approached him several months ago about returning to us in a new capacity.

Ben has thankfully agreed to return as our Manager Of Engineered Services. His primary responsibility will be on improving turn around time and accuracy of our engineered plans destined for State or local approval as well as composing submittal books and making sure that quotes and purchase orders are following these projects. He has been assigned the task of improving efficiencies in that department so that we can have more time to put COMPLETE quotes together encompassing everything that will be needed for the project. All of these things will hopefully encourage our customers to place purchase orders for both equipment and materials on their engineered jobs.



Jeff Oleniczak has been moved into a position to better take advantage of his strengths. He will serve as an engineering and code compliancy consultant, as well as focus more of his attention to technical service and customer support. This should help shorten the wait time for tech service help and keep your technicians more efficient.

Monroe remains committed to making any changes necessary to providing you with the best service possible and we are on the hunt for the best people in the industry. If there is anything that we can do to better serve you and earn more of your business, please do not hesitate to contact anyone in our organization with suggestions.

AIRFLOW DYNAMICS - Duct/Piping Sizing and Design

April 20, 2011

Presented by Jim Mayer of Champion Pipe

This program is loaded with information. We will cover air flow measurement, sensible heat formula & CFM calculations, heat gain/heat loss dynamics, residential design & furnace sizing, duct sizing theory & velocity requirements, duct calculator usage, supply & return system design, filter sizing, flex duct calculations and good installation practices. This program is intense and is a MUST for every installer and service technician.

Program will be held at Monroe Equipment, Inc. from 1:00 - 5:00 p.m. Cost is \$45 per person. Advanced registration is required. Please register online at www.monroeequipment.com or at 262-432-3251.

CHARACTER IS KING

Matt Schneider

I am writing this on my return flight from the 2011 Allied Air Dealer Incentive Trip. Randy Schneider and I were privileged enough to host 14 couples in Puerto Vallarta, Mexico. For those of you who were not able to attend this year or have never had the opportunity to join us, I would strongly suggest that you consider it in the future. We pride ourselves in selecting favorable locations and staying at only the finest resorts and this year's trip did not disappoint.



On Thursday night, Randy most generously took everyone to a 100+ year old restaurant, open to the outside, perched on the side of the mountain, overlooking downtown, with a fantastic view of the ocean. At one point I took a long look at the different individuals I was eating with and came to one consistent conclusion. Every one of the contractors on that trip were people of tremendous character. If I were a homeowner, I would buy from any one of them, for different reasons. Although each one of the contractors I was dining with were diverse, their level of character is easy to see.

When I left Monroe Equipment in 2008 to sell HVAC products retail, another contractor gave me some valuable words of advice. He advised that I should go into every customer's home with the mindset that the customer has a problem and I have the ability to solve that problem. If I maintained the philosophy of proposing what is best for the customer, the customer would in turn reward me with his or her business. The customer would easily recognize my desire for their best interest. He also advised that if I focused on what was best for me (sales, commissions, etc.) I would struggle in retail sales.

I will never forget his advice, because it always rang true. It would be about the 25th day of the month, I would be \$5,000 short of my quota, feeling the pressure and willing to do whatever it took. Whenever I was focused on getting my goal, instead of presenting what was best for the customer, I couldn't sell ANYTHING! I worked with a great guy named Rick who would just tell me "Forget it. On your next call just have fun!" I would take his advice, forget about the pressure, return to the "customer first"

attitude and boom – I would solve a customer's problem and achieve my goal.

Why do you buy from the vendors that you buy from? Do your vendors have your best interest in mind? Several customers have told me in the last few weeks that price is driving their buying decisions. Does buying the furnace that everyone can buy, that everyone is proposing as a second option, that several different distributors offer, for \$50 to a \$100 less, solidify that homeowner's decision to invest in your company? What do you think is more important to the homeowner, that \$50 or the quality of your character? If it was the low price that drives all homeowners, I would have been sitting in a 100+ year old restaurant, open to the outside, perched on the

side of the mountain, overlooking downtown, with a fantastic view of the ocean - eating by myself.

UPDATED WEBSITE



Lynn Beine

After several months of major updates, our newly designed website went live early last week. Check out all the changes at www.monroeequipment.com.

In addition to updated features such as IN THE NEWS, TRAINING (with online registration), and SPECIALS, we now offer ONLINE ORDERING. At this time, not all of our current products have been added, but we should have the majority of them online by the end of April.

If you were a registered user of our old website, you can access the new site with the same user name and password. If you are new to www.monroeequipment.com, you can simply click the ["NOT REGISTERED? CLICK HERE."](#) link in the upper right corner to register.

If you have any problems with any of the new functions on our website or notice any glitches, please let us know. Our goal is to be your #1 distributor!

MICRON GAUGES AND MEASUREMENTS

Kenneth Jung

It is time for A/C season. What is all this fuss about a “MICRON” anyway?

For starters, a few general assumptions need to be made. First, the technician has a functional and accurate set of refrigeration gauges. You know the ones, buried at the bottom of the service truck with the hoses lying loose on the floor with the ends fully encrusted with dirt and grime, ready to hook up to the service valves on the next job.

Secondly, the vacuum pump oil is clean and changed on a regular basis. If there is a strange or acidic smell coming from the oil, or if the oil has a brown tea or darker color, it is definitely overdo for some vacuum pump maintenance. It is a good idea to drain, fill and flush the pump a couple of times with clean vacuum pump oil, especially if it's that bad.

Now for the fun, let's talk about the one tool that all service technicians use on every system they pull an evacuation on...the *MICRON gauge*! A few questions immediately come to mind. **Who** uses a micron gauge? **What** is a micron? **When** do we use a micron gauge? **Where** do we connect a micron gauge? **Why** do we need a micron gauge and **How** do we use a micron gauge?

That is a lot of questions, but all of these points need to be discussed. Some are simple replies and some require a more in-depth explanation.

Who uses a micron gauge? All service technicians and installers involved in the air conditioning or refrigeration industry.

What is a micron? A micron is a very small unit of measurement. De-

pending on how you look at it, a micron is 10^{-6} meter (one millionth of a meter), or $1/25,400^{\text{th}}$ of an inch. Take an inch on a ruler and divide it equally into 25,400 very small divisions. The period at the end of this sentence would measure somewhere between 350 and 400 microns.

If you take a look at your refrigeration gauges, specifically the “blue” low compound pressure gauge, you will notice that the vacuum side of the gauge measuring from “0” down to “30” is calibrated in inches of mercury (in. Hg.) A perfect vacuum, which cannot be achieved unless you are outside the earth's atmosphere, would be 30” Hg. As you look at the small gradient lines and get down to the 28 and 29 inch mark of your gauge you soon realize that the needle of the gauge is wider than the marks on the gauge itself. How can you possibly know what the level of the vacuum really is with this amount of inaccuracy? This is where the micron gauge kicks in and becomes so very important to the technician.

When do we use a micron gauge? On **every** installation or service call that requires the “sealed system” be open to the atmosphere and where a vacuum pump will be needed.

Where do we connect a micron gauge? Honestly, there is no one answer that is more right or wrong than the other regarding location of connection to the sealed system. Regardless of the type of micron gauge being used, (follow the micron gauge manufacturer's instructions) it really does not matter if the gauge is connected to the low or high side of the system. The one location that should be avoided, if possible, is connection directly to the vacuum pump. Doing this will give false readings because



the vacuum pump is the most negative part of the system and the micron gauge will not accurately display what type of conditions are inside the sealed system. The key is to make sure that the micron gauge can accurately measure the system it is connected to.

Also, be mindful of refrigeration service valves, valve cores that restrict the evacuation process and solenoid valves that may be in a closed position unless energized, thereby limiting the openness of the system to be evacuated.

Why do we use a micron gauge? We use it to accurately measure the quality of the vacuum being pulled on the sealed system and to insure that we have a non-condensable and a leak free system. The micron gauge takes this last inch or two of vacuum, depending on the micron gauge, and breaks each inch down into 25,400 segments. This allows the tech out in the field to accurately determine just how good the vacuum being pulled is. There is actually a little more to it than this, but I want to try and keep it on the simple side.

In all actuality, a micron gauge and your refrigeration gauges work backwards, starting from a perfect vacuum and go up from there to “0” and then indicate readings above atmospheric pressure in PSIG (pounds per square inch gauge pressure). Your

MICRON GAUGES AND MEASUREMENTS CON'T.

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refrigeration gauges are already calibrated to compensate for the 14.7 psi of atmospheric pressure at the “0” reading.

Ok, now let's talk about moisture for a minute. In any quantity of air, there is a certain amount of moisture vapor that the air contains. Moisture in any air conditioning system means one thing - service problems! Premature compressor failure, plugged filter driers, freezing up at the metering device, refrigeration oil turning acidic, etc. The result is a system that doesn't work and the customer thinks it is a “bad” piece of equipment.

Proper moisture removal by use of a vacuum pump is vital to the long life that the customer is expecting to receive from their newly installed air conditioning system. It does not take much moisture in the system to start the creation of hydrofluoric and hydrochloric acids that eat away at the compressor. **The only way to accurately determine the quality of a deep vacuum is with a Micron Gauge.**

How do we use a micron gauge? “Vacuum based on time.” I hear that way too often. “Oh, we pull a vacuum for 20 minutes” or “I know that when my vacuum pump changes sound that it's good.” Really??? My question to them is “What micron level is 20 minutes equal to?” There is one thing for certain and that is by not using a micron gauge, you are doing your customer a disservice and guaranteeing them one thing and that is pre-mature failure of the air conditioning system. There is no way that a timed evacuation can be reliable. A three ton vs. a five ton system or a 20 foot line set vs. a 65 foot line set... warm weather vs. cold weather... rainy or damp conditions... how long did the system sit



in an “open” condition... was a nitrogen sweep used during the brazing process to prevent the tubing from oxidizing and keeping moisture levels down? All of these things can have a huge impact on how long it takes to pull an adequate vacuum.

Assuming that the vacuum pump has clean new oil and functions properly and that a micron gauge is connected to the gauge manifold to properly measure the quality of the vacuum being pulled, it is time to evacuate the system. There is no such thing as over evacuating a system.

Let the vacuum pump run. A set of refrigeration gauges only indicates that a vacuum is being produced. The micron gauge is the only tool for

accurately reading that low of a vacuum and telling you the quality of the evacuation process. Once the system has pulled down and maintains a micron level between 300 – 500 microns, it is time to valve off the vacuum pump, sit and wait. Give the micron gauge time to respond to any changes that may be occurring in the sealed system.

The following are general accepted values of micron readings in the industry for air conditioning systems:

- Reading holds under 500 microns indicates that the evacuation is complete.
- Slow rise to 1,500 microns indicates that there is still moisture in the system.
- A rapid rise to atmospheric pressure indicates a system leak.

Remember, evacuation brings out the worst in a system. That's a good thing! Give your customer what they are already expecting. Start with a quality installation that insures reliable equipment operation throughout many seasons of use. A micron gauge can make the difference.

SPRING COUNTER DAY!

April 14, 2011

- FREE Lunch
- FREE Vacuum Pump Set Up & Clean
- Product Specials
- HUGE Spring Cleaning Clearance

GETTING TO KNOW YOU

Donna Inman

Let me introduce Rich Taylor to you. He became a part of our inside sales force here at Monroe Equipment in 2010. If you come into our building, you will most likely see his smiling face at the equipment / parts counter or if you miss him there he probably will be in the warehouse working with Champion sheet metal.

That product line has exploded since Rich has started the “one stop” shop here at Monroe for sheet metal products with Champion. We now also carry bigger sizes of ducts and elbows and just lots of stuff... just ask him and he will tell you!

Rich said he finds it refreshing to come to work here at Monroe – he enjoys the customers, the vendors and his co-workers!!

Rich was born in LA, CA, but has lived in this area since age 8. He used to throw darts and bowling balls and still hits a golf ball occasionally.

Family is a word that pops up when talking with Rich; he is happiest when he can spend quality time with his wife, Christina, and his children. Nathan is 7 and Rich helps out with his Cub Scout Troup and soccer practices as well as being a coach for his Little League Team.



Rich Taylor - CSR Inside Sales

His daughter, Lily, age 5, enjoys gymnastics and will soon play soccer and has her mom as her Daisy leader.

Rich in character is how I would describe my co-worker, Rich Taylor. (Sometimes he is just a character!)

BEADED DUCT VS. CROSS BROKE DUCT

Matt Schneider

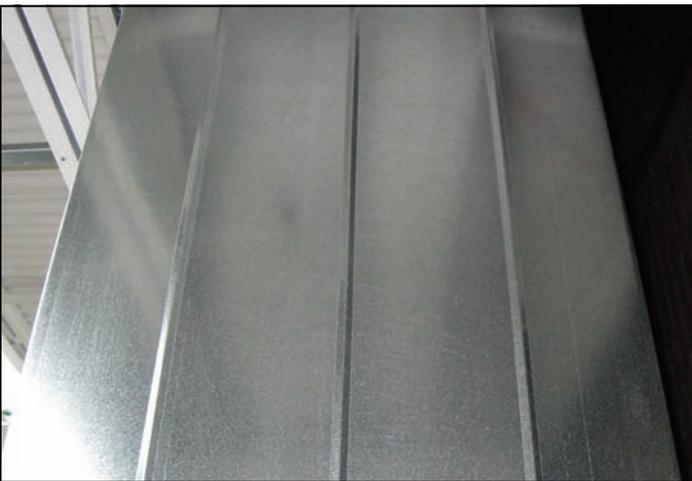
One of the benefits of our new focus on sheet metal duct and fittings, is that I learn something new everyday. When news hit the street that Monroe Equipment was now the exclusive provider of Champion Sheet Metal products for the state, I got numerous calls requesting *beaded duct*. *Beaded duct*? What the heck is that?

Through my exploration, I was educated on the fact that Champion Sheet Metal is one of the only manufacturers in

the industry that still supplies *beaded duct*. *Beaded duct* is ductwork in both 5' and 8' lengths that have 9/16" wide by 1/32" deep beads running the length of the duct in replace of the cross breaking. The bead is continuous except for the 1" at each end allowing for easy "S" cleat insertion.

Why would anyone want *beaded duct*? The beading provides a much more stable reinforcement than the traditional cross brake. This duct has considerably less movement. The continuous bead also allows for the duct to be cut to any length and still retain the manufactured appearance. It also eliminates having a short, cut piece without any reinforcement.

For those of you who were purchasing *beaded duct* from the previous distributor of Champion Sheet Metal, we are here to support those purchases. We have brought in ample stock of this product to serve you. If you have never tried using *beaded duct* before, give it a shot. I witnessed it first hand at this summer's Parade of Homes and it really gave a clean, different look. As always, we are here to be your complete equipment and material supplier.



EXTENDED WARRANTY REMINDERS

Sandy Burns

ALLIED AIR

Allied Air offers an extended 10 year parts warranty on any Armstrong Air, AirEase or Concord product installed in a residential, owner occupied application. Registration must be done by the dealer or homeowner at www.alliedairwarranty.com within **60 days of installation** to activate coverage.

If you wish to offer your customers additional warranty coverage, Allied Air offers an extended warranty program through Service Net. Call Sandy at Monroe Equipment for more information.

BUDERUS BOILERS

Buderus offers an extended 5 year parts and labor warranty for the GB142 & GB162 boilers installed in residential applications. Registration must be done by the dealer or homeowner at www.buderus.us within **90 days of installation** to activate coverage.

If you wish to offer your customers additional warranty coverage, Buderus also offers an extended warranty program through Cornerstone United. Please call 1-800-824-5090 for more information.

WILLIAMSON BOILERS

Williamson offers an extended warranty program through Cornerstone United. Please call 1-800-824-5090 for more information.

If you have any questions or concerns in regards to any of the extended warranty programs, please feel free to contact Sandy Burns at 262-432-3245 or via email at sburns@monroeequipment.com.

SPRING CLEANING TIME

Allen Ausprung

The weather is getting nicer and it's time to open the doors and windows and enjoy some fresh air. Monroe Equipment is opening our doors to you to offer some great spring specials.



Come on in Thursday, April 14th to receive unbelievable pricing on items from filters to fans and much, much more!

Up Coming Events

APRIL 14
COUNTER DAY (With FREE lunch & specials)

APRIL 23
Monroe Equipment CLOSED for Easter Holiday

MAY 28 & 30
Monroe Equipment CLOSED for Memorial Day

The Monroe Igniter is a quarterly publication created exclusively for customers of Monroe Equipment, Inc.



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