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FALL 2017 Volume 2

The Metropolitan Air Conditioning Contractors of New York

cordially invites you to attend their

2017 HOLIDAY PAR

Thursday, December 7, 2017

Cocktail Hour: 6:30 pm Dinner: 7:30 pm

City Cellar 1080 Corporate Drive, Westbury, NY 11590

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We invite you to participate in our Annual Toys for Tots Fundraiser by bringing an unwrapped toy to donate!

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From the President...



Brian Aull Atlantic Contracting & Specialties

HE COLD WEATHER IS FINALLY HERE AND THE HOLIDAY SEASON IS APPROACHING WITH THANKSGIVING RIGHT AROUND THE CORNER.

We had a great turnout for our always popular round table discussions. We all shared our experiences with new technology that we use in the work place in today's world.

Our holiday party will be Thursday December 7th at City Cellar in Westbury, NY. Tickets are \$75 per person. Don't forget to bring a toy for our annual Toys for Tots fundraiser. Hope to see you there.

-Brian



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Editor's Notes by Anthony N. Carbone

With a thriving economy and the job market boiling over like a volcano, it seems like these are good times. Although, I have spoken to many independent contractors and they claim they are off 5% to 7% compared to last year. Is it because of the weather, cool night temperatures during September, and a warm October, therefore, delaying the start-up of heating systems. One contractor said the influx of mini-split ductless units with heat-pumps have taken a bite out of installations.

One reason is there are small companies putting these systems in. They have little overhead and work with two people. There are many outlets to purchase them into competition with larger competitors. these mini-splits, including plumbing supply houses These are changing times and this political that have cropped up, resulting in quick access to administration has not placed its' stamp or direction purchase. A dealer base is not as critical. Cut-in central onto to the HVAC industry. . . yet. . . Stay tuned and air systems are diminishing quickly. To think, once it give your opinion to those of us who are interested in was hard to convince consumers of these new ductless your thoughts. — Anthony N. Carbone units. Now if you drive around many neighborhoods,







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the mini-splits are hanging off many homes, in front, on the side, on balconies, bracketed to walls, etc.

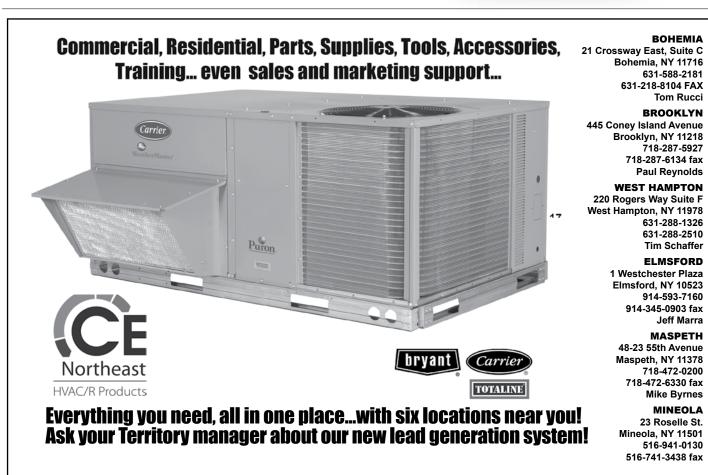
With the thriving economy and a stock market that appears to have no limits. . . the eventuality of consolidation and mergers and acquisitions have begun to become evident.

With robust bank accounts, many larger companies backed with stock reserves can go to market and purchase older companies looking for an exit strategy or smaller well-capitalized companies have a chance to acquire other companies to create more formidable companies that bring together two cultures which bring

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Capacity Regulation of Semi Hermetic **Reciprocating Compressors**

By Jason Staiano, Director of Operations National Compressor Exchange, Inc.

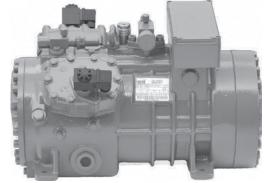
Most refrigeration systems are oversized because they must be able to handle the worst case scenario for possible operating conditions. Since the system is over-performing during normal operating conditions, standard practice is to simply turn the system off and on to regulate cooling capacity. While this process works in general, it is inefficient, is constrained by technical limitations and causes stress to system components.

Generally speaking, reciprocating compressors should only be started and stopped 8-10 times per hour at most. Compressor run time should be between at least 2-5 minutes to ensure proper oil circulation in the system and allow operating conditions to stabilize.

These limitations can cause large temperature deviations in the room because the refrigeration system has to



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over-cool the room to compensate for the time the compressor is off. This means that the compressor/system has to operate at a lower saturated suction temperature (SST) which means lower efficiency.

Variable Refrigerant Flow Compressors

Some reciprocating type compressors can temporarily reduce their displacement mechanically, thereby reducing cooling capacity without starting and stopping. Typically, gas flow to one or more cylinder heads is restricted in a process known as unloading. This avoids the stress of starting and stopping the motor excessively, but can cause other issues. Since the unloaded cylinder bank is running in a vacuum, vibration, heat, and compressor damage can result. Recent innovations in the industry have emerged to address these problems.

One such solution is the patented RSH or Reduced Suction Heads available exclusively from Frascold. Unlike typical unloading heads, the revolutionary RSH system allows a small amount of gas to flow through the unloaded head. This prevents the unloaded head from running in a vacuum and avoids undue heat, vibration and wear. It also allows the compressor to continue running unloaded indefinitely. All Frascold reciprocating compressors are compatible with

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Paul M Bambinelli Senior Account Executive ENTERPRISE FLEET Management

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Enterprise Fleet Management 8334 23RD AVE • EAST ELMHURST, NY 11370-1659 • efleets.com the RSH heads, and they can be added to existing Frascold compressors already in the field.

Variable Speed Compressors

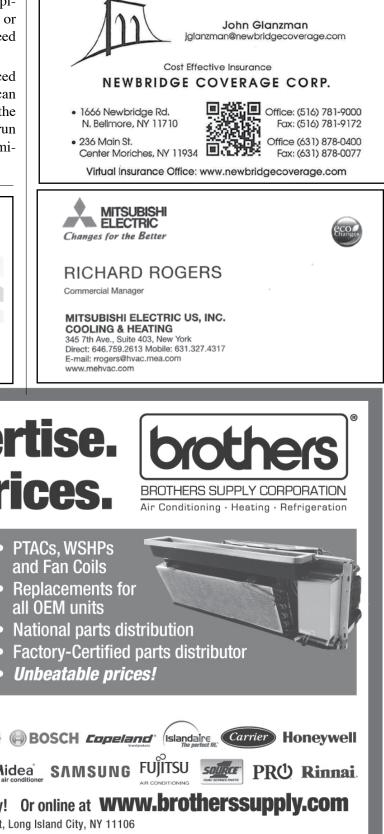
Some compressors solve the problem of capacity control by varying the speed of the compressor. This is typically done through the use of a variable frequency drive or VFD. The VFD can incrementally raise or lower the speed of the electric motor, thereby regulating capacity.

The advantages to this are improved efficiency, reduced start-stop cycles and prolonged compressor life. VFDs can allow soft starting which uses less energy and reduces the chance of liquid slugging. VFDs can also temporarily run the compressor above rated speed for peak duty, thus eliminating the need to over-size the entire system.

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Although VFD equipped compressors are generally more expensive, they provide a number of benefits, and typically pay for themselves within 6 - 24 months.



People & The Workplace

By Alan B. Pearl,

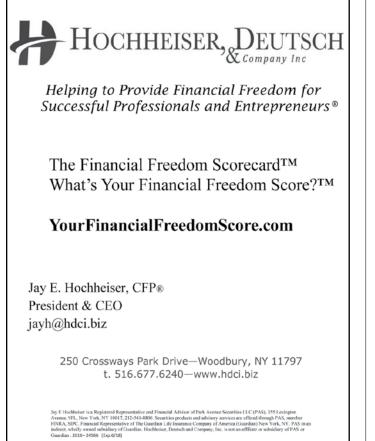
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Can Businesses Require Employees To Get Flu Shots?

As the weather turns cooler and the leaves begin to change, our thoughts turn to pumpkin pie, hay rides, apple picking, and....flu season.

Yes, it's that time of year again. Time for the annual pilgrimage to your doctor or local pharmacy for a vaccination against the flu virus. But what if, not only do you plan to be vaccinated yourself, you intend to require your employees to get the shot as well? Does the law allow that?

The answer is a qualified yes. Generally, employers can mandate that employees receive the flu shot, but they must accommodate employees who opt out based on sincerely held religious beliefs, unless such accommodation would pose an undue hardship for the employer. Accommodation of religious belief is a requirement of Title VII of the Civil Rights Act of 1964. Thus, in the absence of undue hardship,



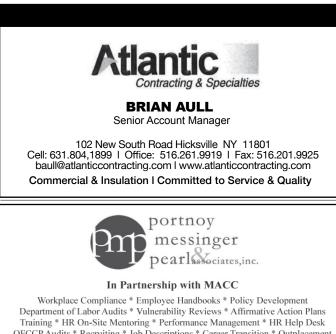
an employee whose religion prohibits vaccines must be excused from a flu shot requirement. Employers are well advised to take religious accommodation seriously, especially given a recent uptick in EEOC cases alleging that employers have violated Title VII by failing to accommodate religious opposition to the flu shot.

That being said, if an employee objects to the vaccine based on grounds other than a sincerely held religious belief, such an objection need not be accommodated. For example, if an employee simply believes that vaccines are harmful (such as those who claim a link between autism and childhood vaccines), the employer is not obligated to excuse that employee from a company-wide vaccine requirement.

The desire by some employers to make the flu vaccine mandatory for staff is understandable. According to the Center for Disease Control and Prevention, U.S. businesses lose approximately \$7 billion a year in sick days and lost productivity each year due to employees' contracting the flu.

Nevertheless, any employer considering implementing a mandatory flu shot policy should consider it carefully. Would an incentive program yield similar results without running the risk of a discrimination charge? Rather than requiring flu shots, would making them more accessible increase the rate of vaccination among your employees? For example, employers might consider enlisting the services of a mobile flu shot clinic to provide vaccinations on the employer's premises.

If you have questions about employee flu shot policies, or any other employment law matter, please contact me. •



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Airdex Has Joined Forces With Lane Associates A Message From Harvey Stoller...

I was only 15 years old when I started working at Airdex Inc. in 1968 with my dad. The thought of succession planning was the furthest thing from my mind. My dad was fortunate to have me take the business to the next generation, but now that I was in his shoes, I didn't know where to begin the process.

When I joined ACCA in the early 1980's, they helped provide me networking ideas with the needed foundation to help grow my business. One of the recurring topics that seemed to come up at the meetings was how companies would pass the torch of their company to the next generation. My wife insisted that our son Adam spread his wings in a different career path since the HVACR business can be all encompassing which put an end to the possibility of keeping the business in the family and moving it to next generation.

After being approached several times by other HVAC companies to purchase Airdex, I quickly dismissed them because they had to pass my "litmus test" for the possible acquisition of my company. If I didn't want you at my

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dinner table, then I felt this would not be company that I would want to entrust Airdex.

Over the years, I can truthfully say that I have been lucky enough to have the trust of many of my customers for over thirty years. In fact, many of these customers I consider to be part of my family. It was important to me that the company who bought Airdex would treat our customers as my dad and I did.

This past year I was lucky enough to be purchased by Lane Associates. They were a perfect match as they are family run business and mirror my sentiments on how a customer should be treated. They fit my "litmus test" for it would be an honor to have them join me at my dinner table.

We must now clear our warehouse of ALL HVAC parts and equipment. Items include: **Rigid pipe threaders** Vermette lifts Parts Tools Refrigerant If interested, please contact Harvey Stoller at (908) 770-4709



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A Lack of Business Knowledge Often Leads to Failure

Business terms and concepts to understand to operate profitably

By Scott Scarabino

Fuel	\$2,800	
Oil changes	\$600	
Repairs and maintenance	\$1,500	
Cleaning and detailing	\$600	
Insurance	\$3,500	
Registration - state required	\$100	
Inspections - state required	\$60	
Payment to lease company or bank	\$0	
Total	\$9,160	

TABLE 1: This table showcases the cost of operating a truck without the payment of the truck included.

THE HIGH FAILURE RATE OR INABILITY TO GROW beyond a few trucks is due primarily to an entrepreneur's lack of business training. The technical skills acquired, which are, of course, an asset, soon become a liability in terms of not having mastered business skills necessary for success and profitability.



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COST OF TRUCKS WITH PAYMENTS INCLUDED		
Fuel	\$2,800	
Oil changes	\$600	
Repairs and maintenance	\$1,500	
Cleaning and detailing	\$600	
Insurance	\$3,500	
Registration - state required	\$100	
Inspections - state required	\$60	
Payment to lease company or bank	\$6,000	
Total	\$15,160	

TABLE 2: This table showcases the cost of operating a truck with the payment of the truck included.

To operate a profitable business, you must know more than metrics, such as bank account balances, accounts receivables, and payables.

Here are a few simple terms to understand:

Gross Margin — This is how much money you have left over after all direct costs needed to perform the job or project. It is generally expressed as a dollar amount and percentage. It can be calculated by job or by a compilation of jobs, which is all jobs performed in say a month's period.

Profit and Loss Statement — This is your report card. If properly setup, it should confirm what you already know about your performance in each period. It is historical in nature, meaning the transactions on it have already occurred. A well-run company should receive this report card monthly. Other reports can be setup to provide granular information for real-time analysis. **Budget** — This is your roadmap. It is vital to know where you are in terms of hitting target sales goals and profitability as the year progresses. It can easily be adjusted as circumstances warrant.



TOP 10 CONCEPTS

Here are the top 10 concepts to become familiar with:

1. Calculating true direct costs for labor and field service trucks;

2. Determining a selling price and resulting gross margin for labor and field service trucks;

3. Determining selling price for materials and equipment;

4. Testing proposed selling prices against the near universe of competition;

5. Determining sales required to support a given overhead;

6. Calculating costs per man day and overhead burden;

7. Calculating capacity to determine the number of field laborers required to achieve desired sales goals;

8. Tracking bids and backlog to achieve accurate performance in measuring effectiveness of advertising dollars spent and performance of sold jobs;

9. Tracking individual performance of field service technicians not job costing; and

10. Utilizing this information in relation to competitor pricing.

CHECK THE PRICE TAG

The No. 1 rule i**n business: Don't se**ll anything unless you know what it costs. Otherwise, you may be giving it away.

To arrive at a selling price, accurately determine your costs for labor and service vehicles.

Listed below are the required inputs to calculate direct labor cost and a method to calculate truck cost per hour:

Calculating Cost of Labor — You must accurately calculate a cost per man hour. This is not just the straight dollar rate you pay your technicians but a blended rate of all your technician's pay plus all legally required obligations, such as employers contribution for Social Security and Medicare, working capital (WC), federal unemployment tax act (FUTA), state unemployment tax act (SUTA), local payroll taxes, and, if applicable, union benefits. It also includes other forms of compensation, such as paid holidays, paid time off (PTO), sick time, and inefficiency.

Calculating Cost of Field Service Vehicles — Often, companies include the cost or payment of the service truck in this calculation. This is a tactical error. You should only include costs that will be incurred by other competitors. These include insurance, fuel, oil changes, state inspection and registration, tires, and an estimate for repairs and maintenance. The payment of the truck

should be an expense below your operating profit. Why? Because if a competitor has a fleet of trucks that are paid off, you may put yourself at a selling price disadvantage by including the monthly payment price of the truck in your cost.

Tables 1 and 2 compare and contrast the costs of operating a truck with and without the payment of the truck included.

The total cost in Table 1 is only \$9,160. The \$9,160 divided by 1,625 working hours per year results in a cost per hour of only \$5.64. To achieve the same 55 percent gross margin, our sell price per hour is only \$12.52.

Now, let's see what happens when we remove the truck payment from the cost and its impact on selling price per hour.

Table 2 totals \$15,160 per truck, including the \$6,000 payment. If we simply divide the \$15,160 by say 1,625 working hours in a year, the cost per hour for our truck is \$ 9.33 per hour. If we want to achieve say a 55 percent gross margin on this cost, we would calculate by dividing \$9.33 by the reciprocal of 55 percent. So, \$9.33 divided by 0.45 equals a \$20.73 per hour sell price.

This is quite a difference.

So, how do we recapture the cost of the purchase price of the truck? Not by increasing your selling price per hour, which makes you uncompetitive, but in performing enough volume of work to achieve the proper amount of sales throughout the year and earning a healthy earnings before interest, taxes, depreciation, and amortization (EBITDA) profit.

If you understand this concept, you have a big leg up on your competition.

Once the above concepts are mastered, you can be on your way to running a profitable business with firm knowledge in your decision-making process to positively impact your financial performance and bottom-line profit.

About the Author



Scott Scarabino Business Operations Analyst with Contracting Business Managementt Specialists

Scott has owned and operated Omni Air Systems in Farmingdale NY for more than 29 years. Contact him at 515-729-8510 or scott@hvacbsi.com

Statement From Stuart S. Zisholtz, Esq.

Home Improvement License

Throughout the years of writing articles, I have emphasized the importance of obtaining a home improvement license when performing residential work. This license can be obtained through the local Department of Consumer Affairs when performing work on a one, two or three family house, condominiums or co-op. Failure to obtain a home improvement license is a valid defense to prevent the homeowner from paying the contractor.

It is also vital that you renew your application and maintain your license while performing residential work. In a recent decision, the Appellate Division, Second Department, modified a lower court=s determination after the New York City Department of Consumer Affairs refused to renew a home improvement license.

In that particular case, a principal of a contractor plead guilty to criminally negligent homicide after a trench excavated by him collapsed upon and killed a worker who was in the trench at the contractor=s direction. The principal



admitted that he did not shore the trench, as required by regulations promulgated pursuant to the Federal Occupation Safety and Health Act (OSHA) requirements to prevent it from collapsing.

When the contractor sought to renew his application for a home improvement license, the New York City Department of Consumer Affairs denied the application without any explanation.

On appeal, the Appellate Division, Second Department, modified the ruling on the grounds that the New York City Department of Consumer Affairs did not specifically address the various factors set forth in the statute and, therefore, did not act properly when it denied the contractor=s application for a renewal. •

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SCHEMATICS & SYMBOLS

COURSE DESCRIPTION

This seminar focuses on the interpretation of construction drawings and specifications associated with HVAC installations in new construction. It explores the many different types of drawings that HVAC technicians and installers work with. It covers the use of specifications and submittals for HVAC equipment installation. It also covers the performance of the takeoff process for HVAC equipment and materials.

WHAT YOU WILL LEARN

Describe the types of drawings HVAC technicians work with and how they are used.

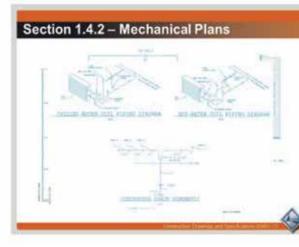
- Explain the initial approach to viewing a set of drawings
- Describe site plans and their purpose
- Describe plan views, elevations, detail drawings, and section drawings and their purposes
- Describe plumbing, mechanical, and electrical drawings and their purposes -
- Describe shop drawings and their purpose
- Describe as-built drawings and their purpose
- Describe schedules and their purpose
- Describe the Request for Information (RFI) and how it is prepared
- Explain the importance of building codes to the design process

· Describe the uses of specifications and submittals in construction projects.

- Describe specifications and their purpose
- Describe submittals and their purpose

· Describe the takeoff process and how it is performed.

- Identify and describe the tools and materials used in the takeoff process
- Explain how to conduct a takeoff circuit



14





8 HOUR PROGRAM

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