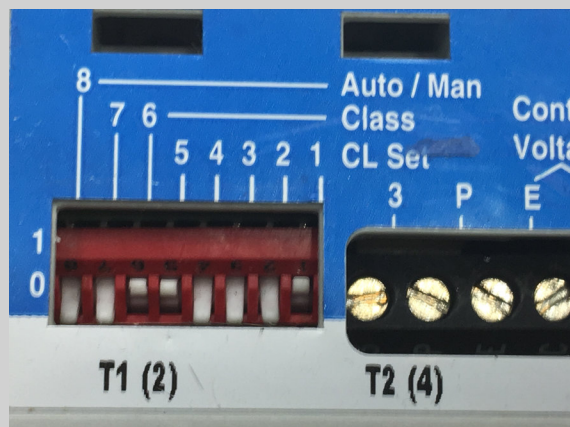


## SERVICE CALLS

## Preventable Flow Control Problems Can Halt Projects



**Bad Valve Modifications** – MSC was called to a project to troubleshoot multiple malfunctioning humidifier control valves, making it impossible to properly control RH in lab spaces. Upon inspection, we discovered that someone (who clearly didn't know what they were doing) had cut, bent, and reinstalled the original control valve positioner springs on all eight valves. New springs were shipped overnight, installed and properly calibrated, returning the labs to proper humidity control.



**Dip-Switch Settings** – A new motor control center was installed for a longtime customer and MSC came in to assist the electrical contractor with commissioning. Condenser water pump starters were tripping and locking out, but everything appeared to be wired correctly. A check of the O&M manuals revealed that several of the dip switches controlling time delay were in the wrong position. The switches were reset, and the problem was quickly resolved.

The inability to accurately measure airflow at the end of a large project can be an expensive showstopper. All too often, this occurs because airflow measuring stations were installed in the wrong location because the manufacturer's guidelines for duct and piping diameters were not properly taken into account.



These issues are entirely preventable, yet troublingly common.

MSC was called in to resolve problems at a large laboratory and R&D facility. The first issue tackled was erratic measurements from airflow measuring stations in the discharge ducts

of over a dozen air handling units. All of the flow stations had been improperly located after elbows in the ductwork, so we had to devise a workaround. The solution: removing the flow stations and installing new higher-quality devices on the inlet of the centrifugal fans, resulting in accurate airflow measurements.

Next, we addressed multiple vortex shedding flow meters in the heat recovery loop. Not only were they installed in the wrong locations, the flow ranges were insufficient, as well. MSC removed them and installed new flow meters in a different part of the system.

The third problem solved involved laboratory air valves that had to be recalibrated in the field with new K factors. Because they were installed in areas where there was excessive turbulence, new flow straighteners were installed to reduce some of the turbulence. MSC then worked with the manufacturer to install new software with multiple K factors to provide accurate measurement.





## A Loving Tribute to Tim Hartigan

1982-2019



Six months have gone by since Tim Hartigan, MSC's Vice President and son of company founder and President Harry Hartigan, passed away on March 18, 2019 at age 36. Though there is still an aura of sadness and loss here at MSC, fond memories of Tim flow freely, evoking more smiles and laughs than we can count.

Timothy Michael Hartigan was born on May 11, 1982. Harry, Barbara, Tim, and Brian Hartigan made their home in Kinnelon, New Jersey, and Tim graduated from Kinnelon High School in 2000. Tim had always wanted to work at MSC alongside his dad, and at age 15 he was hired to clean the shop and help around the office, and after he got his driver's license he was a parts driver during summer breaks. After completing the UANJ HVAC/R program, he made his way up through the MSC's ranks first as an apprentice, then salesperson, V.P. of Sales, General Manager, Vice President, and Partner.

Tim was a large presence at MSC, both in personality and physicality. A big, muscular guy, he was a fitness buff, athlete, and outdoor enthusiast who enjoyed snowboarding, off-road 3- and 4-wheeling, and riding his Harley-Davidson motorcycle. He was a Yankees fanatic and attended many games over the years. He loved country music, and had a seemingly-endless cache of *Seinfeld* quotes to draw from in just about any situation. Always a bit of a neat freak, he would "follow you around with a DustBuster", jokes his uncle, Mike Hartigan, MSC's V.P. of Sales.

From early childhood, Tim had an extraordinary love for animals, including his horse, Shelby. His gentle giant of a dog, Bruce, a Presa Canario and Tim's pride and joy, had the run of the MSC building, as did Louie, the comical French Bulldog puppy Tim adopted after Bruce passed away last year. Louie now resides with Tim's parents, and Shelby was donated as a therapy horse.

More than anything, Tim is remembered for his deep and genuine kindness. He had a distinctive laugh, a great sense of humor, and – cliché as it might sound – an easy smile that could light up a room. He was the type who would drop everything to help others, and his many friends returned the favor in kind. He always looked out for his elderly neighbor, and after every snowstorm, family, friends and neighbors could always count on Tim to plow their driveways without ever being asked. And when his 93-year-old grandmother needed a ride or assistance with something in her apartment, Tim was always there to help.

Tim Hartigan was a much-loved son and brother, a loyal friend, and a truly good man who will forever be missed. For everyone who knew him, Tim's big heart and countless, selfless acts of kindness are his greatest legacies. So, when you see someone who needs help, think to yourself, **"What would Tim do?"**





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## Repair or Replace? Thinking Beyond Energy Ratings

When clients are considering replacing their HVAC equipment, MSC is often asked to compare the energy efficiency of old equipment vs. new in order to justify the replacement. Efficiency is, indeed, a key consideration, but an efficiency rating is only a small part of the equation. There are a number of other important factors that must come into play when determining overall savings.

Many facility owners and managers base decisions largely on efficiency ratings and will often nix replacement when ratings of old and new equipment differ by only a few percentage points. Though repair is often the better choice, savings gained through replacement can be significantly greater when the increased costs of maintaining and repairing older equipment is factored in. Like houses and automobiles (and human beings, for that matter), HVAC repair costs usually increase with age, and things like bearings, compressors, and gas-fired heat exchangers are increasingly likely to fail as units grow older.

New warranties, sizeable rebates, and energy incentive programs like New Jersey SmartStart Buildings can be of considerable value and should always be taken into account when deciding whether to repair or replace equipment. Existing equipment sizing may no longer be appropriate due to changes over the years in how the space is utilized. Parts become obsolete as equipment ages, and retrofits can be challenging as well as costly.

The bottom line is that energy ratings should never be the main deciding factor when weighing the benefits of repair vs. replacement, as there are many other important elements to consider. MSC is expert in complex HVAC systems in commercial and industrial environments and can help guide clients in making the best choices for their business.