

SERVICE CALLS

Balance and Save Money- MSC was called in to provide a second opinion when another HVAC contractor recommended replacing a 10 year-old, 30-ton package unit. We found the unit to be in good running condition, but high static pressure readings indicated significantly reduced flow. Tracing the ductwork, and taking additional static pressure readings, our tech found bubble wrap caught in the turning vanes of a large elbow. Once the plastic was extracted and the system rebalanced, it was working better than ever and saving a lot of money.



Partial Loss of Airflow- Soon after a duct cleaning and filter change by another company, MSC was called in to address concerns of climbing temperatures and low airflow. We verified that a sufficient amount of air was leaving the 40K CFM air handler, but with unexplained loss of static pressure. Ductwork was traced through interstitial spaces, where our tech found two hidden 18" x 18" access holes that had been cut out for duct cleaning equipment and never repaired. The holes were patched and caulked, and sufficient flow was immediately restored.



CHEAP PARTS, EXPENSIVE PROBLEMS

For owners who choose expensive, top-of-the-line HVAC equipment for their projects, the expectation is for efficient, flawless system performance. But this is often not the case when powers-that-be try to shave costs by using cheaper parts and materials. Just a small handful of subpar parts can throw a huge, costly wrench into the most advanced systems.

This was a tough lesson learned at an expansive new facility. Multiple custom HVAC units were failing to start consistently and experiencing inexplicable nuisance trips while running. Attempts by the installing contractor to figure out what was causing the problems were futile, and with constant complaints and downtime piling up, owners were becoming increasingly frustrated. Millions had been invested in what was supposed to be a state-of-the-art system, and it simply didn't work. MSC was referred to the client and we were called in to assess the situation.



As we always say at MSC, it's never just one thing, and this was also the case here. As technicians observed the systems attempting to start up and operate per sequence, they immediately noticed that outside air damper limit switches were not "making" consistently, having no repeatability. When dampers were open fully, the switches would fail to start the fans.

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- 24/7/365 Emergency Response / Get Ready For Cooling Season

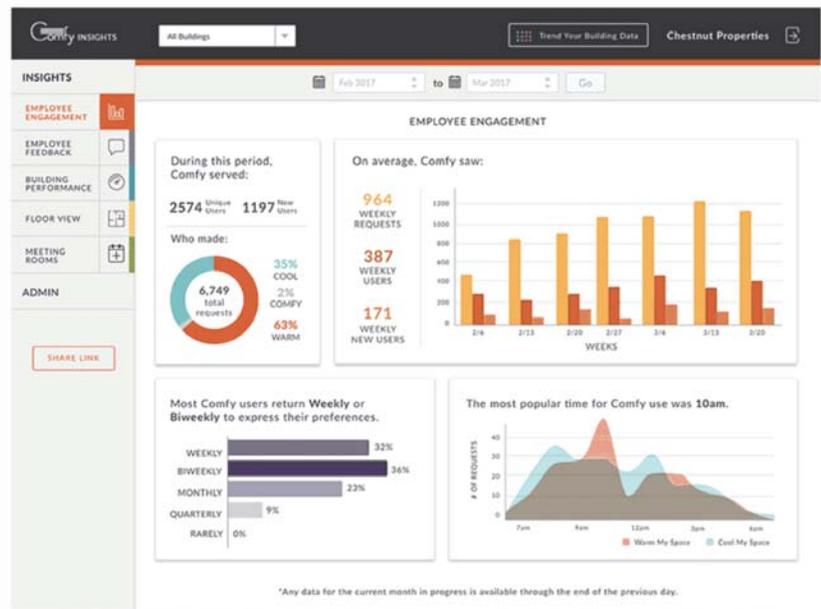
REVOLUTIONARY COMFY APP LETS EMPLOYEES CONTROL COMFORT

Workplace temperature complaints are an age old problem. While some employees shiver at their desks wrapped in blankets and sweaters, nearby coworkers sit sweating in front of a fan. There are numerous reasons why office temperatures are so difficult to regulate, including the number of occupants, heat sources, vent placement, windows, and sunlight. Physiologically, women have slower metabolic rates than men, and the thermal comfort model used in most buildings was developed in the 1960s based on the metabolism of a 40 year-old, 154 lb. man. The result is wasted energy, unhappy occupants, and lost productivity.

Oakland, California-based Comfy has developed an innovative occupant-controlled smart building software app that allows on-demand, personalized comfort using a smartphone app or web browser. Comfy connects building automation systems to the cloud, integrating human interaction and machine intelligence to optimize building systems. Clicking “Warm My Space” or “Cool My Space” signals the nearest VAV unit to provide ten minutes of heated or cooled air. Over time, by logging the time, day, and location of individual requests, Comfy identifies trends and preferences and automatically adjusts temperatures accordingly.

For example, Comfy learns to keep a space cooler in the afternoon when sunlight adds heat, or that a conference room requires additional cooling during regularly-scheduled meetings. It can be used in open office layouts using “Buddy Mode”, which requires at least two people in the same zone to make the same request before a response is triggered.

Comfy claims that typical energy savings range between 15% and 25%, and a 2016 U.S. Green Building Ground study projected 20% savings on cooling and 47% on heating for most federal government buildings. On average, the app has an 80% adoption rate by employees, and users report an 83% increase in workplace satisfaction. It has successfully been implemented by Google, Johnson Controls, Cisco, and many other clients.



CHEAP PARTS, EXPENSIVE PROBLEMS *Continued From Page 1*

At other times, the switches would open or break during operation. Several key pressure transmitters were found to randomly malfunction, as well. Our technicians examined several of the parts in question and found all of them to be very poorly made. Somewhere along the line, someone decided to save a few dollars on a Rolls Royce system by throwing in a few cheap parts.

On MSC's recommendation, all of the damper limit switches and pressure transmitters throughout the facility were replaced with reliable high-quality parts, and the system was recommissioned where needed. As expected, all problems immediately ceased.



TECH TALK

MSC - THE ONLY TRUE HVAC SERVICE COMPANY - WE FIX IT

NEWSLETTER - MAY 2018

973-884-5000

24/7/365 EMERGENCY RESPONSE IS OUR DUTY

HVAC equipment can fail at the most inopportune times – in the middle of the night, on holidays, during weekends – and fixing it as soon as possible can be critical in many cases. MSC takes seriously our duty to take rapid action when urgent calls come in. Our technicians are on call 24/7, 365 days a year.

During the Arctic freeze in January, MSC received a phone call in the middle of the night from a hospital with a frozen heating coil and water leaking onto the floor. Our on-call technician responded immediately, first isolating the coil then locating and repairing the leaks. The very next day, another MSC service tech was dispatched to a midnight emergency call at another hospital. A hot water pipe had burst, and the odor of antifreeze was spreading throughout the facility. Upon his arrival, the technician found firefighters on site and staff moving patients to a separate wing. Fortunately, he was able to quickly locate and repair the leak, and patients were able to return to their rooms a short time later.

Many big-name HVAC service providers will not respond if the caller does not have an existing client account or maintenance agreement. MSC understands the gravity and potential repercussions of system breakdown, particularly in mission critical facilities, and will respond to any call for help. We partner with parts and equipment suppliers that open up for us at any time of the day or night, including weekends, to help us support our clients.



TIME TO GET READY FOR COOLING SEASON



It is spring again, time to replace winter filters and clean evaporator coils, condensing coils, and drain pans. Cooling towers and tower water filtration systems should be cleaned and tested. Flush and blow out chilled water systems and clean strainers; the same goes for reheat hot water systems. Check for refrigerant leaks in all DX systems.

Spring is swing season when we run cooling during the day and heat at night, so make sure economizer cycles are programmed correctly. Lastly, make sure all systems operate to design intent to conserve energy and extend equipment life.