

SERVICE CALL

MSC can solve any problems with your HVAC and control systems...GUARANTEED



Neutral & Induction Problems -

MSC was called in to a large hospital to find out what was wrong with a new large control and security system. There were many unexplained control anomalies that needed to be corrected ASAP. We found shared neutrals on power circuits and induction problems within the control panel. Problem solved.



MRI Cooling -

Magnetic resonance imaging machines generate a lot of heat, which must be dissipated by a cooling system. Temperature must be tightly controlled. MSC provides immediate emergency service for all MRI equipment, as down time is not an option for medical facilities and patients who depend on them.

THE LATEST HVAC TECHNOLOGY IN OUR INDUSTRY:

New green technology is constantly being introduced and touted in our industry, but a lot of it is not widely used or available for a variety of reasons. Here is a sampling of newer technology that customers are really buying, installing, and reaping the cost benefits.

Boiler condensing economizers are heat exchangers that reclaim both sensible and latent residual heat from boiler flue gases, and transfer the recovered heat to a cold water stream. There are two types of economizers. Direct contact systems, which expose flue gases to water droplets, are capable of heating water to 140F. Indirect contact systems pass flue gases over tubular heat exchangers and can achieve temperatures as high as 200F. Facilities utilizing this technology can improve overall heat recovery and steam system efficiency to 90-95% and reduce energy costs by 10-15%.

Closed-loop fluid cooling system: An alternative to the traditional cooling tower, which exposes process cooling water to the outside atmosphere, the closed-loop system isolates fluid from the atmosphere, preventing airborne contaminants from entering the system. There are many advantages to the closed-loop system. It requires less maintenance, reduces water treatment costs, conserves water, and cleaner fluids increase system efficiency. Closed-loop fluid cooling systems can save 50-90% on electricity and use up to 95% less water.

Manufacturers are now offering **oil-free centrifugal compressors** that boost energy efficiency, reduce maintenance, and eliminate the need for high-maintenance oil management systems. These systems use magnetic bearings to "float" rotor shafts and impellers on an invisible, frictionless magnetic cushion, eliminating wear and reducing noise. Oil-free centrifugal compressors have been proven to cut operating costs by as much as 47% over conventional compressors.



DOE AND THE \$11.5 MILLION THERMOSTAT

The U.S. Department of Energy is the appointed leader in championing our nation's energy efficiency and conservation. But in 2009 the DOE was put in the awkward position of admitting that they failed miserably in using one of the simplest methods of conserving energy: turning down the thermostat.

The department's inspector general audited 55 DOE buildings and found that, had they properly employed thermostats to automatically adjust heating and cooling on nights and weekends, they could have saved \$11.5 million per year in energy costs. That is enough energy to power more than 9,800 homes for a year. The study found that, in most cases, the equipment was in place but went unused, leading to the conclusion that the DOE's failure to use it is largely due to complacency.

The DOE has taken steps to ensure that proper equipment is installed in all of their buildings and properly utilized by facilities managers. This should serve as a lesson to all of us to do the same.



Persian Windcatchers

Ancient A/C Technology...

Two thousand years ago, an ingenious device called a windcatcher was developed in Persia to create natural ventilation and cooling in buildings without the use of any mechanical devices. About 500 years ago, these devices came into wide use throughout the Middle East.



There were two main types of windcatcher found in fourteenth century buildings and homes: the unidirectional and the multidirectional. The unidirectional system featured a tall tower with an opening that faced the prevailing wind. Using natural differences in air pressure, air was channeled down into the building through the tower, circulated throughout, and vented through openings at the top of the structure. In the multidirectional system, the tower had four open sides that could be opened or closed depending on the direction of the wind. Clay pools of water were placed at the bottom of the shaft to humidify and cool the circulating air.

These very effective systems are still widely used throughout the Middle East today. Inspired by this ancient technology, green-minded companies in the US are currently developing wind-harnessing equipment that can help to significantly offset energy costs.