

# ENERGY CONSUMPTION REDUCTION AND SUSTAINABILITY



## Indoor Air Quality Monitoring and Trending



Measure and validate real-time performance of the building HVAC. Identify excess energy use. Balance energy performance with indoor health metrics.

## HVAC Energy Reduction - ASHRAE 62.1 Outdoor Air Alternative



HVAC Load Reduction (HLR)

Utilizing HLR technology, mechanical codes allows for significant reduction of outdoor air when utilizing effective air cleaning alternatives. Reduction of outdoor air reduces cooling and heating load as well as energy consumption.

## Enhanced, Low-Pressure Drop Filtration



High Efficiency, Low-Pressure Drop Filtration

Indoor air quality improvement doesn't have to result in increased energy consumption. Our enhanced filtration products offer MERV 13+/16+ filtration efficiency with the corresponding pressure drop of MERV 8 or less. Reduce fan power, increase air flow, and increase filtration performance.

## Solar Enhanced HVAC



Solar Enhancement for RTUs, Chillers, Residential

iAIRE's patented Solar HVAC adds a solar panel to HVAC equipment that dramatically reduces the amount of energy it consumes. All iAIRE's Solar HVAC equipment is eligible for any Federal, State, Local or utility company credit, rebate or incentive available for solar equipment.

## Modular Heat Pump Chillers



Heat Pump Chillers

Our heat pump chillers can connect to multiple third-party fan coil units via water piping to provide cooling and heating. Similar to VRF outdoor units, these chillers can modulate capacity depending on the requirements of the various zones, which saves energy and improves occupant comfort.

## Unitary System to VRF/Heat Pump Conversion



Outdoor Unit Heat Pump Conversion

For either one-to-one indoor unit to outdoor unit heat pump conversion, or multiple indoor units on a single heat pump chiller, we can provide a pathway to heat pump conversion of existing cooling-only and/or fossil fuel-based heating systems. Renovate with ease and achieve electrification goals.

## Geothermal and Water Source Heat Pumps



Geothermal / Water Source Heat Pumps

Heat pumps enable sustainable comfort, helping residential, municipal and commercial facilities heat and cool environments while also lowering energy costs, energy consumption and carbon footprints—which ultimately helps reduce the global impact of greenhouse gases.



# ENERGY CONSUMPTION REDUCTION AND SUSTAINABILITY



## Optimized Hydronic Pump Operation and Management



Design Envelope Pumps



Active Pump Manager

Design Envelope technology is a demand based intelligent control solution, enabling the greenest and most cost-effective hydronic HVAC systems. Paired with Pump Active Management, Design Envelope systems can eliminate energy drift to realize up to 30% in pump energy savings.



## Free-Cooling Chiller Enhancement



Free-Cooling Chiller Customization

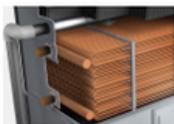
Integrated free cooling upgrades for chillers not only reduces electrical consumption and emissions – but also reduces the wear and tear of compressor operation in low temperatures. Free cooling is an ideal solution for all applications requiring a year-round cooling load.



## Hybrid Closed Circuit Fluid Cooler



Hybrid Fluid Cooler



Copper Heat Transfer Coil

The Marley LW sets the standard for energy efficient fluid coolers. Utilizing copper coils and EC fans, the LW offers 7-times the thermal conductivity and uses fractional fan horsepower of comparable systems. The LW is fully recyclable for an optimal eco-friendly solution.



## Sustainable Water Treatment



Chemical Free Water Treatment



Solids/Liquids Separators

Water is a valuable natural resource that must be managed responsibly and efficiently. Water treatment alternatives to hazardous chemical use and consumable filtration products exist and are commercially proven to be effective.



## Adiabatic Humidification



Direct Adiabatic



Duct Dist. Adiabatic

The health benefits of maintaining optimal humidification levels is undeniable. In utilizing adiabatic humidification technology, there is no requirement for thermal energy from an external source. The only energy consumed is to power a water pump, just 4 watts for every l/h of capacity. Additionally, cooling in summer is provided by lowering air enthalpy, while humidification in winter has the advantage of being able to use thermal energy at low temperature.



**HEDRICK**

2360 Oak Industrial Drive NE  
Grand Rapids MI 49505  
616.454.1218

[www.hedrickassoc.com](http://www.hedrickassoc.com)