



WME C-Vintage  
Low Condenser Water  
Temperature Savings

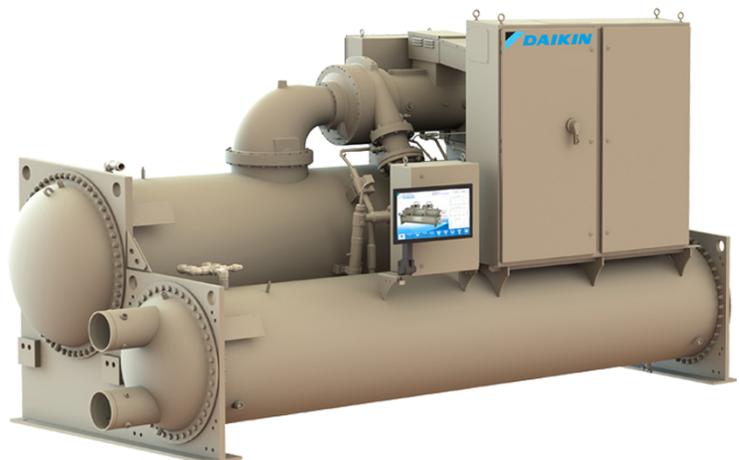
## Quality air for better healthcare outcomes

Healthcare facilities focus on creating comfortable healing environments for their patients. With indoor air quality (IAQ) top of mind in these facilities, investing in HVAC equipment that can remove pathogens and create healthier air is a must.

Daikin's Magnitude® WME C-vintage chiller can uniquely meet these IAQ demands with inverted duty operation. This means the chiller has the capability to accept entering condenser water at a lower temperature than the leaving evaporator water temperature and can eliminate the waterside economizer from the system.

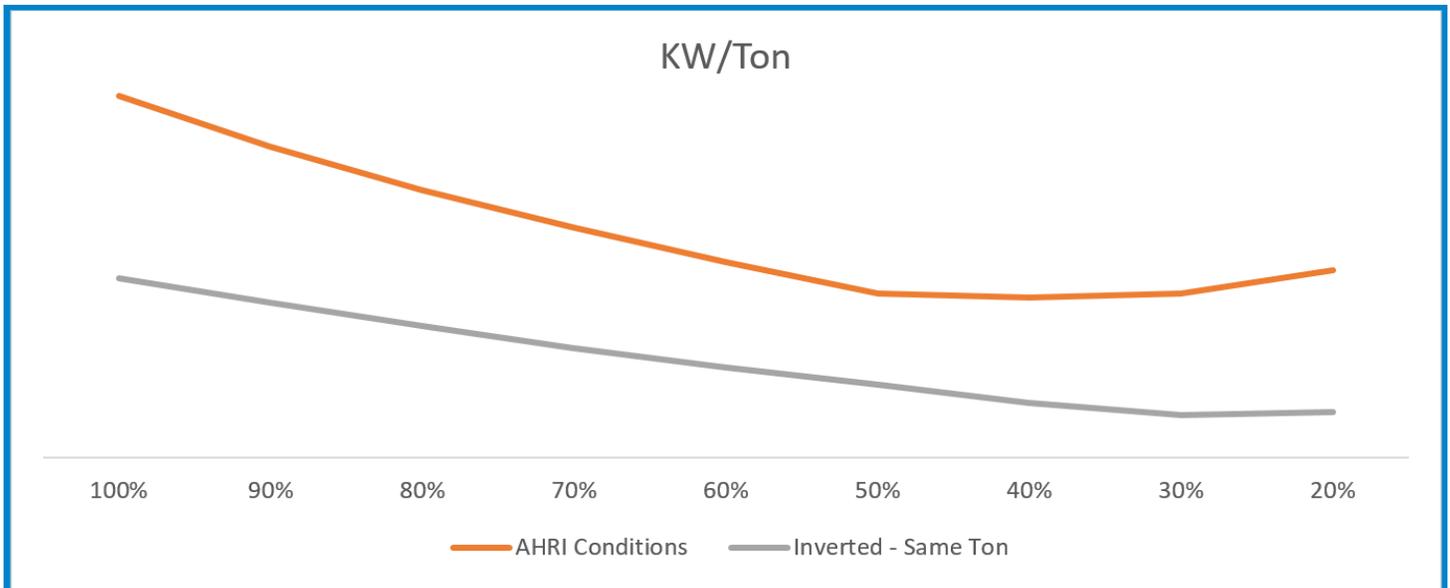
The elimination of the economizer simplifies the pressurization control, which is essential in reducing humidification and maintaining quality air.

Humidity levels can mean life or death in a hospital. Operating rooms need to maintain a consistent air temperature and humidity control to avoid bacteria and infectious disease from spreading.



## Increased energy savings with more cooling capacity

In the graph below, compare a chiller running at AHRI and at inverted conditions. At full load the kW/ton difference is around 50 percent, while at low loads that same difference rises above 70 percent.



More simply, at inverted conditions you can run the chiller as low as 0.08 kW/ton, which is an immense energy savings using less energy than a light bulb. With inverted operation, you have the ability to extract more cooling capacity out of the same chiller, up to a 20 percent increase when dropping from AHRI conditions to inverted conditions.

WME C-vintage has key features built into its design that make it possible to achieve these inverted conditions, allowing healthcare facilities to more simply meet their IAQ needs. WME C-vintage is an oil-free magnetic bearing chiller, eliminating problems with oil return to the compressor, and instead using a permanent magnetic motor. This combination allows the rotor to spin from a very low rpm to a maximum rpm and to ramp up or down very quickly.

Lastly, the use of an oversized electronic expansion valve (EXV) provides precise refrigerant flow between condenser and evaporator in order to maintain evaporator leaving water temperature, even when entering condenser water temperature is lower than the evaporator leaving water temperature.

