



Chiller Modernization Solutions



Maximize the Return on Your HVAC Investment

Your Daikin centrifugal chillers are the heart of your facility's HVAC system and are designed to provide decades of efficient reliable cooling. However, even the best older chillers can benefit from the addition of modern technology to provide efficiency and reliability advantages that can improve your operating cost savings.

Daikin service is uniquely qualified to evaluate your chillers and develop a plan tailored to your situation and needs. Daikin has the tools and technology to determine the modernization opportunities that can benefit you. After we understand your system, we use our selection, optimization and energy analysis software to pinpoint savings opportunities.

We offer a variety of modernization solutions to enhance your centrifugal chiller's performance. We also provide expert engineering and turnkey installation to make the modernization process go smoothly and quickly.



Controls Upgrade

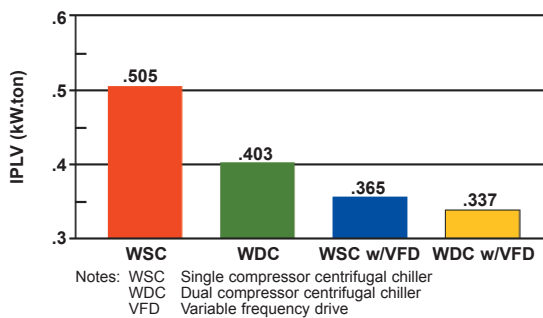
An upgrade to a MicroTech® II, unit controller provides your centrifugal chiller with the consistent, accurate benefits of direct digital controls.

- Easy to use, 15-inch color touch screen display.
- Graphical data trending to identify performance issues over time, so you don't have to depend on handwritten logs.
- Precise, direct control of pumps and tower valves and fans.
- Alarm memory storage for easy troubleshooting.
- Online equipment manual for easy access to operating information.
- Open Choices™ feature for easy integration using BACnet®, LonTalk®, or Modbus®, standard open protocols. If you have the early MicroTech II touch screen, you can upgrade to the newer, larger screen.

Variable Frequency Drives

A new solid state variable frequency drive (VFD) can replace less reliable electro-mechanical motor starters. When coupled with MicroTech II unit controls, a VFD allows the most efficient part load possible by matching motor performance to the actual cooling load requirement.

- Can typically reduce your centrifugal chiller's energy usage by up to 30%.
- May qualify for rebates from your local utility for even more savings. (The KW/ton efficiency improvement with a VFD is shown in the chart below.)
- Increased reliability from soft starting, which puts less stress on motor, gears and other electrical components.



Centrifugal Compressor

Current production Daikin centrifugal compressors, whether magnetic or conventional bearing models, are efficient and reliable. Both are available for retrofit on existing McQuay centrifugal chillers. Daikin can select a compressor for your chiller that meets your performance (capacity, efficiency, and sound level) needs. Centrifugal compressor retrofits can be a cost effective way to:

- Extend the operating life.
- Reduce maintenance costs.
- Reduce the cost of operating* your HVAC system.

*Note that retrofits may qualify for rebates or tax incentive which would further improve the payback frame of a chiller modernization.



Oil Pump/Cooler

Design enhancements in today's original oil pump and oil cooler provide improved operating performance and optimal oil temperatures. With these improvements, retrofitting an existing McQuay or Daikin McQuay chiller with a new oil pump/cooler can result in:

- Reduced maintenance costs.
- Extended chiller operating life.



Refrigerant Relief Valve

Manufacturers of refrigerant relief valves, along with codes in many municipalities, require regular valve and discharge piping inspection and recommend periodic valve replacement for safe system operation. As part of routine maintenance, Daikin Applied recommends visual inspections of pressure relief valves every six months and replacement at least every five years. Having Daikin service inspect and/or replace your chiller's refrigerant relief valves can:

- Improve system reliability.
- Reduce the possibility of an expensive accidental refrigerant loss.

Solutions That Work for You

From minor maintenance to comprehensive modernization service, Daikin service offers solutions to help you maximize your return on your HVAC equipment. As HVAC system experts and equipment manufacturers, we offer unique skills to keep your system performing efficiently and reliably.

Contact your Daikin service office to discuss how your system could benefit from chiller modernization. To find a Daikin service office near you, go to www.DaikinApplied.com.