

Single & Dual Compressor Centrifugal Chillers with R-134a or R-513A refrigerant

Models WSC/WDC/WCC 300 to 2700 tons

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QUALITY AIR AT AN **AFFORDABLE PRICE**

Centrifugal chillers are a significant investment in your building system. You need a chiller that offers flexible design and a return on that investment throughout its lifecycle. Whether your requirements are for air conditioning, district energy plants or process cooling, new construction or renovation, Daikin centrifugal chillers are the right choice with real benefits for your bottom line.

Daikin offers a wide range of centrifugal vessel and component combinations to provide the right solution for your specific application. The single compressor WSC offers excellent full-load and part-load performance. Our dual compressor WDC chillers offer many attractive benefits, including outstanding part-load efficiency and system redundancy similar to two separate chillers, with a lower total-installed cost. The WCC (series counterflow) design offers excellent full-load efficiency along with system redundancy.

FEATURES & OPTIONS

QUIET COMPRESSOR(S)

Precision, gear-driven impeller design reduces sound levels at partload conditions while the chiller's refrigerant injection system absorbs sound energy for even quieter operation.



KNOCKDOWN OPTION

Total knockdown of the unit allows entry to limited-access equipment rooms, making it ideal for both new equipment and replacement projects.

WORLD-CLASS UNLOADING

Daikin compressors reduce the discharge area as load decreases to maintain gas velocity significantly reducing the compressor's tendency to stall or surge.

SEISMIC COMPLIANCE

Centrifugal models WSC/WDC offer optional IBC seismic certification and HCAI (OSHPD) pre-approval.

VARIABLE FREQUENCY DRIVE (VFD) OPTION

An optional VFD with cabinet optimizes part-load efficiency — a key performance feature since most chillers operate at part-load 99% of their life.



COAST-DOWN PROTECTION

The coast-down protection feature helps guard against possible bearing damage resulting from disruptions to power.

SITELINE[™] BUILDING CONTROLS

SiteLine building controls provide scalable, cloud-based solutions for remote monitoring and maintaining optimal performance.



WIDE OPERATING RANGE

Both single and dual compressor centrifugal systems allow operation at varying lift conditions.

SMART REFRIGERANT

WSC, WDC and WCC model chillers utilize earth-friendly, non-ozone depleting R-134a or R-513A refrigerant.

HMI TOUCH SCREEN

A graphically intuitive and easy to use interface enhances operator productivity, allowing for status and control information at a glance or touch.



LUBRICATION SYSTEM

An electric oil pump assembly supplies lubrication at controlled temperature and pressure to all bearing surfaces and is the source of hydraulic pressure for the capacity control system.

EQUIPMENT SOLUTIONS & COST SAVINGS

Model WSC - Single Compressor



- Excellent full-load and part-load performance capability with optional unit-mounted VFD
- Semi-hermetic compressor design reduces maintenance by eliminating shaft seals associated with other open-motor designs
- Outstanding unloading capability via moveable discharge diffuser on the compressor
- Seismic compliant



- Dual compressor configuration provides excellent redundancy for mission-critical applications
- Model WDC optimizes part-load efficiency and model WCC optimizes full-load efficiency
- Outstanding unloading capability via moveable discharge diffuser on the compressor
- Lowers maintenance costs

Model WDC - Single Circuit



- Provides the lowest energy consumption and delivers the best part-load performance
- Ideal for use in smaller chilled water plants where unit unloading is expected
- Reduced floor print for tight-fitting spaces (16' compared to 20' WCC model)
- Perfect for retrofit applications requiring two-pass or three-pass vessels
- Built-in redundancy a single compressor provides 60% of full-load capacity

Seismic compliant

Model WCC - Dual Circuit



- Delivers the lowest kW per ton performance at full-load conditions
- Optimal for large central plants where cycling chillers for system capacity reduction is expected (three or more chillers)
- Great for high chilled water delta-T and single water pass, low water pressure drops
- Built-in redundancy a single compressor provides 50% of full-load capacity
- Offers high efficiency and large capacity with series counterflow

Model WDC/WCC - Dual Compressor

TWO CHILLERS IN ONE PACKAGE

INSTALLED COST SAVINGS

Daikin dual compressor centrifugal chillers take up less floor space than multiple single compressor chillers, while still delivering the combined capacity.

A dual compressor chiller can also provide installed cost savings of up to 35% compared to installing two separate chillers by reducing hardware and rigging costs and eliminating second chiller piping and pumps.





CHOOSING THE RIGHT CHILLER

Daikin manufactures several centrifugal chiller types to meet a wide variety of project size and performance requirements. From healthcare, schools and office buildings to data centers, district energy plants and manufacturing facilities, we have the right chiller solution for your commercial and industrial application.

APPLICATION	DAIKIN CENTRIFUGAL TYPE*
Cooling, most hours at full-load conditions, under 1,350 tons	WSC single compressor chiller
Cooling, most hours at full-load conditions, above 1,350 tons	WCC dual compressor chiller, dual circuit
Cooling, most hours at part-load conditions	WDC dual compressor chiller, single circuit
Heating, such as space heating or domestic hot water	TSC Templifier® water heater
Simultaneous cooling and heating	HSC heat recovery chiller
Optimized part-load performance	Variable frequency drive options
Cooling 86 to 1,600 tons, optimized full-load and part-load performance	Magnetic bearing compressor centrifugal chiller*

*For more information on the Daikin Magnitude® magnetic bearing chiller, visit www.DaikinApplied.com/products/chiller-products/magnitude

FOR MORE INFORMATION ABOUT OUR COMPLETE OFFERING OF HVAC SYSTEMS AND SOLUTIONS, VISIT **DAIKINAPPLIED.COM** TO FIND AN OFFICE NEAR YOU.





