



Centrifugal Chillers



Single and Dual Compressor
200 to 2700 tons



Manufactured in an ISO 9001 & ISO 14001 certified facility



A life cycle return on your investment



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 life cycle. Whether your requirements are 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 quality at a reasonable price

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 and part load performance while the single compressor WTC gives outstanding full load performance even at demanding high lift conditions. 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. 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 life cycle. Whether your requirements are 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.

Our dual compressor WCC and WCT series chillers with 2 independent refrigerant circuits and inherent series counterflow design provide customers with unparalleled efficiency and redundancy.



Efficient, flexible and sustainable centrifugal chillers

Quiet compressor design with movable discharge geometry that reduces sound levels at part load and optional refrigerant injection system absorbs sound energy for even quieter operation.

Wide operating range using single or 2 stage compressor to allow operation at varying lift conditions.

Variable frequency drive option optimizes part load efficiency, a key performance feature since most chillers operate at part load 99% of their life.

Knockdown option for total knockdown of the unit allows entry to equipment rooms where access is limited, making it ideal for replacement projects.

Positive pressure design does not require a purge system and offers reduced maintenance of seals and hydrodynamic bearings.

World class unloading capability
The movable discharge diffuser increases stability while reducing sound and vibration.



Model WSC – Single Compressor

- Excellent full and part load performance with optional unit mounted VFD
- Outstanding unloading capability through the use of moveable discharge diffuser on the compressor
- Gear-driven design allows for ease of motor maintenance & reduction in impeller size for a given capacity



Model WTC – Two Stage Single Compressor

- Advanced two stage compressor design and economizer gives industry leading full load performance
- Industrial design provides reliable performance even at demanding high lift conditions
- Outstanding unloading capability through the use of movable diffusers on the compressor discharge
- Back to back impeller design reduces thrust loads on the impeller minimizing wear



Model WCT - Dual Circuit Two Stage Dual Compressor

- Advanced two stage compressor design and economizer gives industry-leading full-load performance
- High redundancy - two compressors, two economizers and two expansion valves permit unparalleled reliability
- Able to maintain a high ΔT while also having low heat exchanger pressure drops owing to the single pass configuration
- Designed for high efficiency at full load conditions

Easy integration with our Open Choices® feature using BACnet®, LonWorks® or Modbus® communications without an expensive gateway panel.

R-134a refrigerant has no ozone depletion potential and no phase out schedule.

Power failure coast-down protection helps guard against bearing damage after a power failure.



Model WDC—Single Circuit

- Built-in redundancy - dual compressors wherein a single compressor will provide 60% of full load capacity
- Overall lowest energy consumption with best part load performance
- Smaller footprint chilled water plant where unit unloading is expected
- Floor space is limited (16-foot vessel length compared to 20-foot for a WCC unit)
- Two or three pass vessels are required, typical of retrofit applications

Touch screen operator panel is graphically intuitive and easy to use for enhanced operator productivity. Important status and control information is available at a glance or a touch.

Seismic compliance option for both IBC seismic compliance requirement and OSHPD pre-approval.

Semi-hermetic compressor with refrigerant-cooled motor reduces maintenance by elimination of shaft seals associated with open motors



Model WCC—Dual Circuit

- Built-in redundancy - dual compressors wherein a single compressor will provide 50% of full load capacity
- Lowest kW per ton performance at full load
- Large central plant where cycling chillers for system capacity reduction is expected (three or more chillers)
- High chilled water delta-T, and single water pass, low water pressure drops
- High efficiency and large capacity with an inherent series counterflow design



Installed cost savings-two chillers in one package



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

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



Model WSC

- Capacity: 200-1250 tons (AHRI conditions)
- High part load efficiency with optional unit mounted VFD's
- Excellent full load performance

Model WDC

- Capacity: 400-2500 tons (AHRI conditions)
- Outstanding part load performance
- Redundancy for increased reliability
- Some sizes available with 10/11kV50Hz power option

Model WCC

- Capacity: 1200-2700 tons (AHRI conditions)
- Two refrigerant circuits for true counterflow. Built-in redundancy with dual compressors and dual circuits
- Outstanding full load performance
- Some sizes available with 10/11kV50Hz power option
- Available single water pass arrangement to reduce pump energy costs

Model WTC

- Capacity: 1200-1600 tons (AHRI conditions)
- Outstanding full load performance with economizer and two-stage compressor design
- Industrial grade design suitable for harsh environments
- Standard bolt together construction and flange connections allows for disassembly at jobsite

Model WCT

- Capacity: 2300 - 3200 tons (AHRI conditions)
- Excellent full load performance
- High redundancy: Dual twin stage Compressor arrangement with two economisers and two expansion valves
- Available in series-counterflow arrangement with single pass heat exchangers and capacity up to 6000 tons
Available with motor voltages from 3000V to 13800V and 50 Hz/ 60Hz

Centrifugal Products included in separate manuals:

Magnitude® Magnetic Bearing Compressor Chillers Magnitude® Model WMC

- Capacity: 86-400 tons
- Oil-free, frictionless compressor
- Excellent part-load performance
- See CAT 602 for more information

Magnitude® Model WME

- Capacity: 400-1500 tons
- Oil-free, frictionless compressor
- Outstanding efficiency
- See CAT 604 for more information

Make it a complete system for optimum system performance and reliability

STEP 1

Choose a Centrifugal Chiller



200 - 1250 ton
Single Compressor Chiller



1200 - 1600 ton
Two Stage Single Compressor



400 - 3200 ton
Dual Compressor Chiller

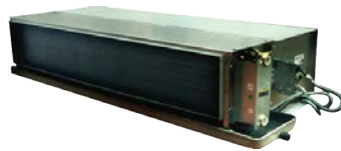
STEP 2

Add a Daikin air handler or terminal unit

AHU



FCU



The industry leader in environmental solutions

Daikin is committed to sustainable practices as part of our corporate culture. We believe it is the right thing to do for our customers, our community, the environment, and ourselves. As the global HVAC leader, Daikin has a unique opportunity to make a difference in sustainable initiatives and continue to lead the industry in environmental solutions.



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