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WMT

*Magnetic Bearing Two-stage
Centrifugal Chiller*

With Next Generation HFO Refrigerant,
R-1233zd

Cooling Capacity: 400-600TR



Daikin WMT magnetic bearing centrifugal chiller is a revolutionary revolution that lives up to our mission of delivering best air conditioning product and service for customer around the world. Relying on our rich industrial expertise and continuous technology innovation, we make it possible to develop an industrial-leading magnetic bearing centrifugal chiller with fully optimized efficiency as well as a next generation low refrigerant-R1233zd.

WMT, a new model of Daikin magnetic bearing centrifugal chiller family, gives a new definition of superior performance and sustainability. This chiller is designed from the very beginning to meet or even surpass customer increasingly demanding expectation.

WMT Magnetic Bearing Two-stage Centrifugal Chiller



Excellent
Performance



AHRI
Certification



Environmental
Friendly



Outstanding
Reliability



Magnetic
Bearing Driveline



Lower
Ownership Cost



Excellent Performance

In order to achieve industrial-leading chiller performance, WMT has been applied with several latest technologies. Those come from a combination of variable speed driveline, magnetic bearing technology and high efficient two-stage compressor.

An unit-mounted VFD starter on WMT helps to regulate motor speed to match exactly required cooling demand to achieve the best possible efficiency at different load.

In addition, the permanent magnetic motor technology boosts our latest generation centrifugal chiller into a higher efficiency level in the field.

The two-stage compressor of WMT models designed with a flash-tank type economizer enhances significantly chiller performance compared with single stage chiller design. Meanwhile, the compressor provides stable and reliable operation across a wide range of operating condition.



Outstanding Reliability

Daikin, as an industrial leader on magnetic bearing technology applied in air conditioning, has been studying and manufacturing magnetic bearing centrifugal chillers for more than a decade.

Extremely high reliability and stringent stability is the top priority for magnetic bearing chillers. High accuracy sensors installed on WMT compressor are utilized to keep detecting shaft position on a high frequency basis. Corrective move will be conducted to trim and maintain the shaft position if necessary. In an unlikely event of sudden power outage, WMT compressor will be given full protection by running in generator mode which reversely provides power to controls and electronics until a completely stop. Extra backup bearings are additionally designed to catch and support shaft in off-time. This proven outstanding reliability of WMT is capable of providing stable cooling as well as high performance.



Magnetic Bearing Driveline

WMT has chosen an integrated magnetic bearing drive system to offer exclusive efficiency and sustainable operating. The magnetic bearing system features the single moving shaft directly connected to motor eliminating any oil lubrication system or mechanical friction. This results in enhanced chiller efficiency, more sustainable performance and longer lifespan compared to conventional centrifugal chiller with oil lubrication or coupling system.

Besides, magnetic bearing driveline benefits customer oil-free or frictionless feature at the lowest sound and vibration level, which is specifically an optimum solution for sound-sensitive or vibration critical application.



Environmental Friendly

A low global warming potential (GWP) refrigerant-R1233zd is primarily considered for WMT centrifugal chiller develops. R1233zd, one of next generation green HFO refrigerant with a very low global warming potential (GWP) value, is classified as an "A1" refrigerant according to ASHRAE Standard 34.

This refrigerant selection is not just for today, also a green solution for future. This is a part of our social responsibilities to living environment to protect our planet through keeping carbon dioxide emission and any other environment impact at the minimal level.



Lower Ownership Cost

To maximize value added to customer, WMT has been designed with optimized operating efficiency to minimize energy cost by fully leveraging advantages of two-stage compressor and variable speed driveline.

Owing to magnetic bearing technology, WMT provides a low maintenance cost. Any oil-linked maintenance is unnecessarily required like oil charge, filter, oil heater, wear parts, etc.

Thanks to the low operating cost, WMT gives customer a fast payback, which is one of decisive element in initial investment.



AHRI Certification

The WMT chiller performance is certified by the Air Conditioning, Heating and Refrigeration Institute (AHRI) following the latest issued AHRI Standard 550/590.