

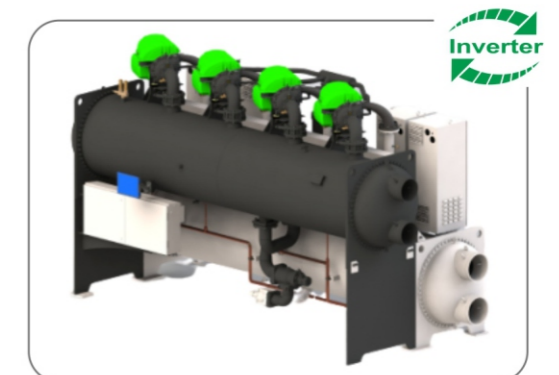


HXE

Magnetic Bearing Two-stage Centrifugal Chiller

With Next Generation HFO Refrigerant,R-1234ze(E)

Cooling Capacity:100-500RT



Daikin reserves the right to change any product specification without prior notification.

From: MQWH
Version:PFHXEE001
Issue Date:Nov.2020
Supersedes: None

HXE

Magnetic Bearing Two-stage Centrifugal Chiller



Superior Performance — Stable and Reliable — Magnetic Bearing direct driveline — Environmental Friendly — Lower Ownership Cost — Smart Control

Superior Performance

As the global HVAC leader, Daikin has perfectly combined the most advanced technology with water cooled chillers to provide excellent performance.

- ▶ Magnetic bearing centrifugal compressor has been designed for oil free operation, resulting in eliminating oil contamination in the refrigerant and heat transfer surfaces to provide outstanding operating efficiency without any performance penalty compared to any lubricated-system chiller.
- ▶ HXE also integrates VFD technology allows the compressor to unload smoothly from maximum to minimum load for superior part-load performance in comfort cooling applications.
- ▶ An additional flash tank economizer has contributed to efficiency improved by operating the two-stage compression system.



Stable and Reliable

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.

- ▶ The advanced in-line compressor allows for compact design . The design of magnetic bearing drive system does not need lubrication makes the chiller far more reliable than oil or refrigerant lubricated chillers.
- ▶ Highly accurate sensors installed on 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, 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 o



Magnetic Bearing direct driveline

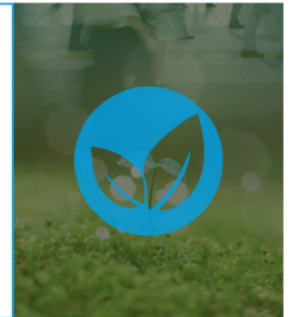
HXE has chosen an integrated magnetic bearing drive system to offer exclusive efficiency and sustainable operating.

- ▶ 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 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-R1234ze(E) is considered for HXE centrifugal chiller develops.

- ▶ R1234ze(E), one of next generation green HFO refrigerant with a very low global warming potential (GWP≈1) value, is classified as an "A2L" 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

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

- ▶ To maximize value added to customer, HXE has been designed with optimized operating efficiency to minimize energy cost by fully leveraging advantages of two-stage compressor , variable speed driveline.
- ▶ Owing to magnetic bearing technology, HXE provides a low maintenance cost. Any oil-linked maintenance is unnecessarily required like oil charge, filter, oil heater, wear parts, etc.

Smart Control

Latest microprocessor technology utilized in Micro Tech V control system to offer stable and efficient chiller control.

- ▶ User-friendly operation interface with key parameters on the screen.
- ▶ The occurred alarms are retained in the controller 's memory to aid in trouble shooting and fault analysis.
- ▶ HXE chiller provides seamless integration and comprehensive monitoring, control and two-way data exchange with industry standard protocols such as LONWORKS, Modbus or BACnet .

