

# ATHENA AIR Cooled Magnetic Bearing Centrifgal Chiller ACM-AE SERIES Cooling Capacity 87~502TR (306 ~1765KW)





## ACM-AE 87~502TR (306~1765KW)





## Condenser and fans

The fans are designed for efficient operation with a direct-drive EC condense fan and a brushless motor. It features a durable, weather-resistant enclosure and maintenance-free bearings for long-lasting performance. Additionally, the fans are protected by coated steel wire safety guards for added security.

### **Obsigned for Data Centers**

Maximizing chiller uptime is vital for mission-critical, temperature-sensitive operations. Data centers face risks of service disruption, equipment failure, and costly production losses. Our high-performance ACM-AE chiller is designed for continuous operation and high-lift applications, ensuring reliability in demanding environments.

### Features and Benefits

ACM-AE Air Cooled Magnetic Bearing Centrifugal Chiller, uses environmentally friendly refrigerant HFO R513A. The entire product line features high energy efficiency, installation ease, control flexibility, high reliability and advance DB Director Controller.

### Compressors

The semi-hermetic magnetic bearing centrifugal compressor features two-stage compression with variable speed. The magnetic bearing eliminates contact with the shaft, reducing mechanical friction during operation. This significantly enhances compressor efficiency and boosts the overall energy performance of the unit.





### Reduced Maintenance

Magnetic bearings compressor operate without any physical contact and eliminate the need for oil by using magnetic fields to create a contactless support system for the rotating shaft. This oil-free design reduces maintenance requirements, extends the service life of the equipment, and enhances overall system reliability.

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### DB Director

DB Director Controller is equipped with RS485 and Ethernet communication ports as standard. This user-friendly design allows Building Management Systems (BMS) to interface directly with the chiller via RTU, Modbus IP, or BACnet IP communication protocol. LONworks or BACnet MSTP communication protocol can be established with installation of an optional adapter.



### Rapid Restart

Athena's control system is engineered for rapid restart, allowing the chiller to return to full load in as little as 180 seconds after a power interruption. This makes it the ideal solution for critical applications, such as data centers, by minimizing cooling downtime following power disruptions.

## Integrated Free Cooling

Utilizing cold outdoor air to bring down return chiller fluid temperature. Minimize compressor dependency to provide cooling whenever outdoor air temperature is low enough to assist cooling the chilled fluid circuit. While chiller in full free cooling mode, only fans and pumps are running.



## Adiabatic Cooling System

Adiabatic system pre-cool incoming condenser airstream. Condensing temperature can be reduced when lower air temperature passing through the condenser coil. Therefore greater amount of heat can be rejected through the condenser coil.



## © Standard & Optional Features

Item	Standard	Optional
Evaporator Connection	_	Free Cooling, Adiabatic Cooling
Water flow swtich	-	CE Marking, NEMA 4 min Fluid &Ambient -40F
evaporator Insulation Thickness	1" [25mm]	2" [50mm]
Condenser type	AL CU	TCP Coating, E coating, Microchannel
Spring Isolator	_	Neoprene Pad; Spring Isolator
Compressor Main Power Isolation	-	Main Incoming Isolator
Working pressure Vessels	150PSI	250 PSI, 300 PSI
Communication Protocol	Modbus RS485	BACnet MSTP; LONworks; ModBus TCPIP; BACnet TCPIP
Vessel Code Compliance	_	ASME
Compressor Extended Warranty	1 Year	2 Years; 5 Years

DUNHAM-BUSH<sup>®</sup> www.dbamericas.com info@dba

info@dbamericas.com

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