



# HELIOS

## Variable Speed Air Cooled Screw Chiller ACHX-EVE

Cooling Capacity 93~514TR (326 ~1806KW)



Data Centers



Buildings



Airports



### Dunham-Bush

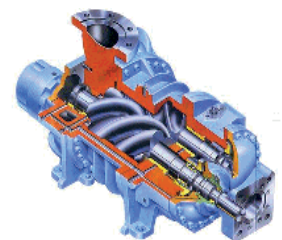
Dunham-Bush is dedicated to driving innovation in product development. Our commitment to innovation, combined with an aggressive approach to growth, ensures that we consistently meet the evolving needs of our customers. No other HVAC manufacturer adopts this level of dedication to meeting your performance expectations.

### Features and Benefits

ACHX-EVE Variable Speed Air Cooled Screw Chillers, uses environmentally sound refrigerant HFO R513A. The entire product line features high energy efficiency, installation ease, control flexibility, high reliability and advance DB Director Controller and improve sound performance.

### Compressors

The packaged chiller is equipped with semihermetic rotary twin-screw compressors, each featuring an integrated oil sump. Each compressor includes a sight glass, suction filter, discharge check valve, and discharge valve for enhanced performance and reliability.



### EC Condenser and fans

The fans are designed for efficient operation with a direct-drive EC condens 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.



### Oil Management

The chiller package is designed to ensure optimal lubrication, extending compressor life and maintaining system efficiency. It includes an advanced pressure differential lubrication system, featuring an oil filter, sight glass, oil sump, and oil sump heater. The oil heater activates when the chiller is off, preventing oil dilution and further enhancing reliability and performance.



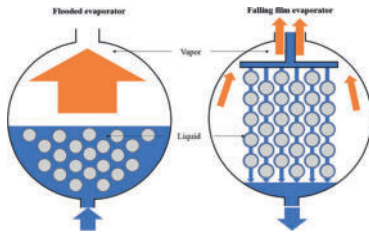
**ACHX-EVE**  
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# ACHX-EVE Variable Speed Air Cooled Screw Chiller

## 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.



## Flooded Evaporator

The flooded evaporator maximizes heat transfer efficiency with lower suction superheat and a smaller approach, enhancing chiller performance. Water heads are easily removable for inspection and cleaning, ensuring low fouling and sustained system efficiency.

## Economizer

The economizer circuit features a heat exchanger, expansion valve, and solenoid valve, effectively subcooling the refrigerant before it enters the evaporator. This process enhances cooling capacity by increasing the subcooling effect. As a result, the system delivers significantly improved cooling performance with only a minimal increase in energy consumption, leading to a higher Energy Efficiency Ratio (EER).



## Electrical expansion valve

The Chiller features an electronic expansion valve for precise refrigerant flow control, improving efficiency by optimizing superheat. The refrigerant control system also ensures the proper liquid level in the evaporator to protect the compressor from liquid slugging.



## Standard & Optional Features

Item	Standard	Optional
Evaporator Connection	Vitaulic groove	Flanged;
Water flow switch	—	NEMA 1, NEMA4 rated, Thermal Dispersion Flow sensor
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 TCP/IP; BACnet TCP/IP
Vessel Code Compliance	—	ASME
Compressor Extended Warranty	1 Year	2 Years; 5 Years

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