Vertiv™ Liebert® AFC

Air-cooled free cooling chiller from 900 - 1800 kW

Standard versions

- Chiller
- Free Cooling chiller

Environmentally friendly

- HFO Refrigerant options with Low GWP (Global Warming Potential) including
  - R513A
  - R1234ze
  - R515B
- Optional inverter screw compressors for improved efficiencies
- High Efficiency EC fan motors

The Vertiv™ Liebert® AFC Chiller is an efficient, scalable, and robust data center cooling solution

- Industry leading seasonal efficiencies with inverter driven screw compressors that reduce energy consumption
- Reduced footprint for greater heat rejection densities
- Modular design with multiple sizes ranging from 900 - 1800 kW
- Precise temperature control with Vertiv™ Liebert® iCOM™ controls system
- Flexible and customizable designs for a wide variety of data center applications
- Built with premium quality components for high durability and functionality

Cooling capacity from 900 - 1800 kW

Designed and optimized for data centers

Liebert® AFC is a high-end air-cooled free cooling chiller specifically designed for efficient and reliable thermal management of Data Centers or processes with higher supply/return water temperatures. Liebert AFC introduces a new Screw Chiller platform including:

- High return water temperatures with a large temperature differential
- Vertiv™ Liebert® iCOM™ control with data center driven controls algorithms with Vertiv™ Liebert® iCOM™-S integration
- Designed for maximum efficiency with oversized free cooling coils for increased surface area and maximum economization
- Liquid cooling and AI transitional readiness

Highly configurable for any application

- Engineered To Order (ETO) designs for maximizing unit performances in any application
- Dual power supply with Automatic Transfer Switch (ATS)
- Fast restart function on Uninterruptible Power Supply (UPS) line and/or ultra-capacitor for minimal downtime during power loss
- Several pump and hydraulic configurations for redundancy and varying flow regimes
- Coil coating options for harsh installation environments
- Low noise options for sound attenuation
- Large 10” touch screen display with wide range of communication protocols

Technical Specifications

CIZ - Low GWP Inverter Screw (Chiller Only - R1234ze)

Physical Data	CIZ125	CIZ135	CIZ145	CIZ150
Unit Dimensions (L x W x H), in (mm)	427 x 93 x 114 (10846 x 2362 x 2896)	478 x 93 x 114 (12141 x 2362 x 2896)	527 x 93 x 114 (13386 x 2362 x 2896)	527 x 93 x 114 (13386 x 2362 x 2896)
Est. Dry Weight, lb (kg)	21250 (9640)	23500 (10660)	25750 (11680)	25750 (11680)
Fan Qty.	16	18	20	20
Performance Data				
Nominal Cooling Capacity, Tons (kW)	386 (1357)	430 (1512)	457 (1608)	477 (1677)
EER (Btu/W-h)	14.5	14.3	14.7	14.2
Power Input, kW	320	360	380	403
Sound Level, dB(A)	82.2	83.1	82.6	82.7

FIZ - Low GWP Inverter Screw (Direct Free Cooling - R1234ze)

Physical Data	FIZ115	FIZ125	FIZ135	FIZ145	FIZ150
Unit Dimensions (L x W x H), in (mm)	427 x 93 x 114 (10846 x 2362 x 2896)	427 x 93 x 114 (10846 x 2362 x 2896)	478 x 93 x 114 (12141 x 2362 x 2896)	527 x 93 x 114 (13386 x 2362 x 2896)	527 x 93 x 114 (13386 x 2362 x 2896)
Est. Dry Weight, lb (kg)	25200 (11430)	25200 (11430)	28900 (13110)	30750 (13950)	30750 (13950)
Fan Qty.	16	16	18	20	20
Performance Data					
Nominal Cooling Capacity, Tons (kW)	354 (1247)	380 (1336)	423 (1489)	451 (1587)	470 (1652)
EER (Btu/W-h)	13.8	13.7	13.6	13.7	13.5
Power Input, kW	309	332	373	394	417
Sound Level, dB(A)	80.8	82.3	83.0	83.0	82.8

CH3 - Screw (Chiller Only - R513A)

Physical Data	CH3120	CH3135	CH3145	CH3160	CH3175
Unit Dimensions (L x W x H), in (mm)	427 x 93 x 114 (10846 x 2362 x 2896)	427 x 93 x 114 (10846 x 2362 x 2896)	478 x 93 x 114 (12141 x 2362 x 2896)	478 x 93 x 114 (12141 x 2362 x 2896)	527 x 93 x 114 (13386 x 2362 x 2896)
Est. Dry Weight, lb (kg)	21250 (9640)	21250 (9640)	23500 (10660)	23500 (10660)	25750 (11680)
Fan Qty.	16	16	18	18	20
Performance Data					
Nominal Cooling Capacity, Tons (kW)	388 (1364)	429 (1510)	464 (1633)	490 (1725)	557 (1958)
EER (Btu/W-h)	14.3	13.9	14.2	14.1	14.1
Power Input, kW	317	368	393	418	474
Sound Level, dB(A)	79.0	78.9	80.0	80.3	80.8

FH3 - Screw (Direct Free Cooling - R513A)

Physical Data	FH3120	FH3135	FH3145	FH3160	FH3175
Unit Dimensions (L x W x H), in (mm)	427 x 93 x 114 (10846 x 2362 x 2896)	427 x 93 x 114 (10846 x 2362 x 2896)	478 x 93 x 114 (12141 x 2362 x 2896)	478 x 93 x 114 (12141 x 2362 x 2896)	527 x 93 x 114 (13386 x 2362 x 2896)
Est. Dry Weight, lb (kg)	25200 (11430)	25200 (11430)	28900 (13110)	29000 (13155)	30750 (13950)
Fan Qty.	16	16	18	18	20
Performance Data					
Nominal Cooling Capacity, Tons (kW)	372 (1308)	421 (1481)	457 (1606)	482 (1695)	547 (1924)
EER (Btu/W-h)	13.6	13.2	13.5	13.4	13.4
Power Input, kW	327	382	405	431	490
Sound Level, dB(A)	79.2	80.0	80.1	80.4	81.0

Preliminary data, Nominal capacity is based on 95°F ambient temperature; 82-66°F fluid inlet/outlet temperature; ethylene glycol 30%; power supply 460V/3ph/60Hz
Sound Pressure Level (SPL) calculated at 3.3ft (1m) distance

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