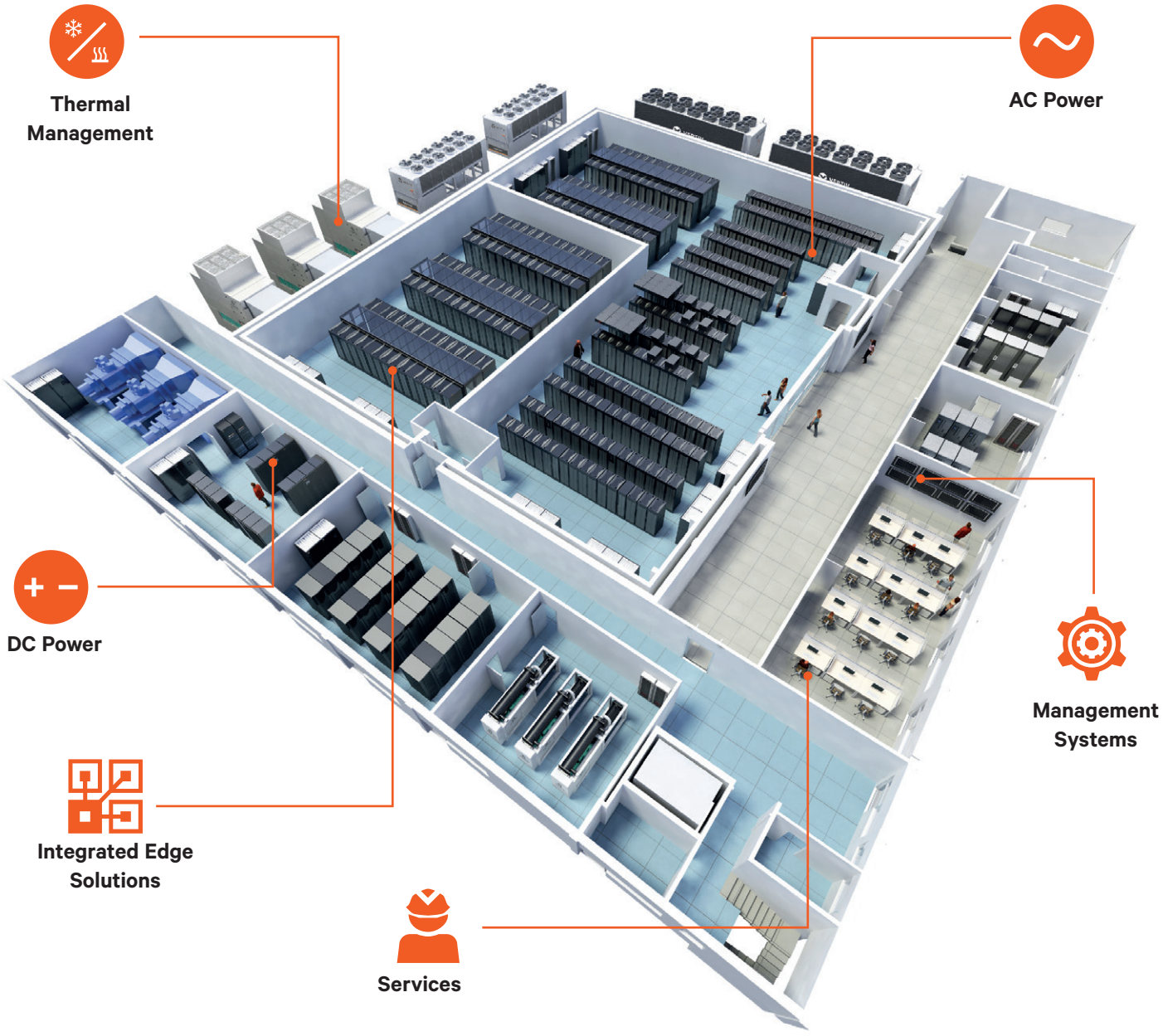
Vertiv™ Liebert® PCC Scroll

65 kW to 350 kW

Air Cooled Modular Chiller for Mission-Critical Applications

Vertiv solves the most important challenges facing today's data centers, communication networks and commercial & industrial facilities with a portfolio of power, cooling and IT infrastructure solutions, and services that extends from the cloud to the edge of the network.

Architects of Continuity™



What are our core differentiators?

VISIONARY EXPERTISE

IMMERSIVE COLLABORATION

RELENTLESS AGILITY

INTELLIGENT ECOSYSTEM

Telecommunications and IT infrastructure have evolved as the next digital frontier and ranked 3rd and 5th in the list of World's most critical sectors.* Their business model directly relies on availability, reliability, and efficiency of the computing system and must meet the application needs. In terms of services, dynamic heat load management and supporting cooling solution play a pivotal role in these critical infrastructures. Hence, heat removal is one of the most crucial priorities in today's mission-critical applications.

Utmost care should be taken while designing a cooling scheme to preserve data as next-gen businesses primarily rely on data processing, exchange and on time transmission.

*: *Total 22 sectors are listed as World's most critical sectors.*

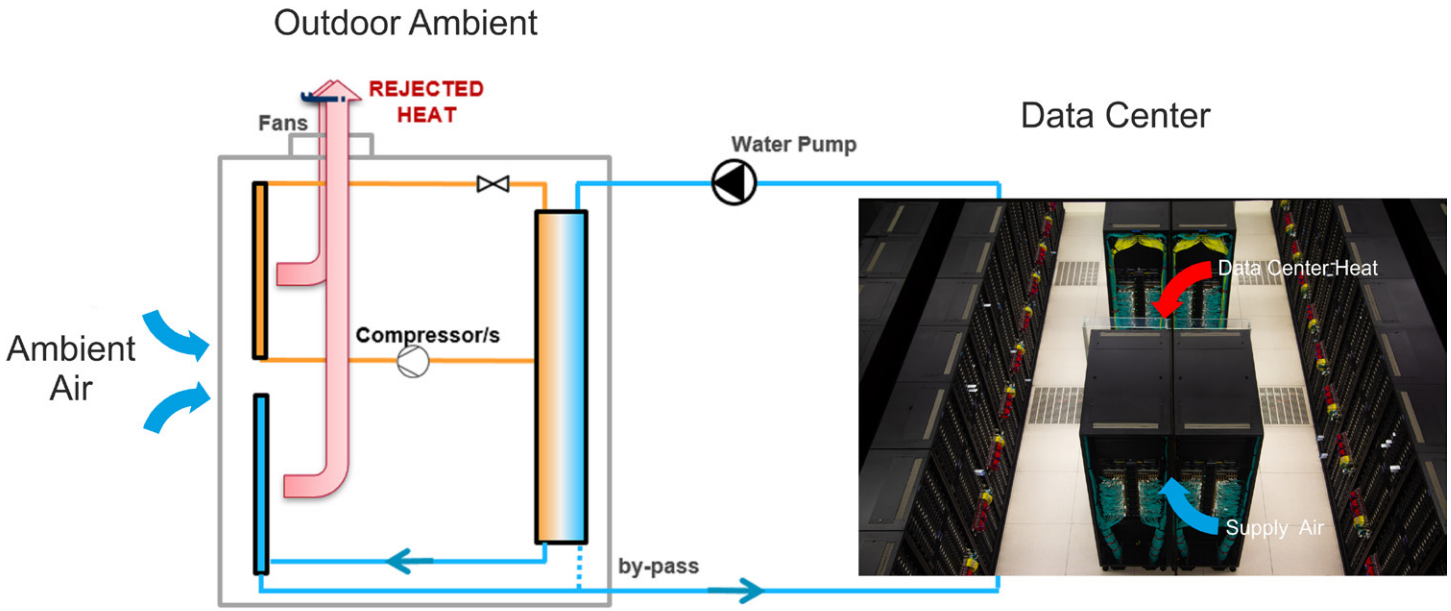
Vertiv™ Liebert® PCC Scroll Range

Vertiv introduces Liebert® PCC Scroll range of chillers to offer a complete package solution for mission-critical applications with high energy efficiency, total reliability, environment-friendly, guarantee reduction in total ownership cost, and easily integrable in all top-tier data centers.

Available in higher water temperature and free cooling versions, are just the answer that green data centers are looking for; its a perfect match to modern mission-critical installations.

DATA CENTER	BANKING	INDUSTRIAL	TELECOMMUNICATION
			

Emerging Trend in Chiller Technology in Mission-Critical Application Space



Mixed Mode Operation

Chiller Features Required in Typical Data Center Environment

- Availability and efficiency
- Intelligent software to manage the inrush current
- Embedded monitoring and controlling interface for entire chiller system

As per recent market trends, there is a rise in operating temperature under which new IT equipment operates. This leads to the progress in energy efficient solutions that extend free-cooling availability to higher ambient temperatures. Modern trend also indicates the high water temperature version, moreover, is optimized for all the elevated temperature such as 18 °C to 12 °C chilled water temperatures and up to 32 °C chilled water inlet.

Three Operating Modes

- Mechanical cooling («DX» direct expansion)
- Free-cooling «FC»
- Mixed mode «FC+DX» free-cooling + backup compressors

Typical Applications

- Data centers with medium / high water regime (18 °C to 12 °C, 26 °C to 20 °C, ASHRAE)
- Traditionally used in cold countries

Air-cooled Models 65 kW to 350 kW - Standard & High Efficiency Series

Free Cooling Option is Available in All Models

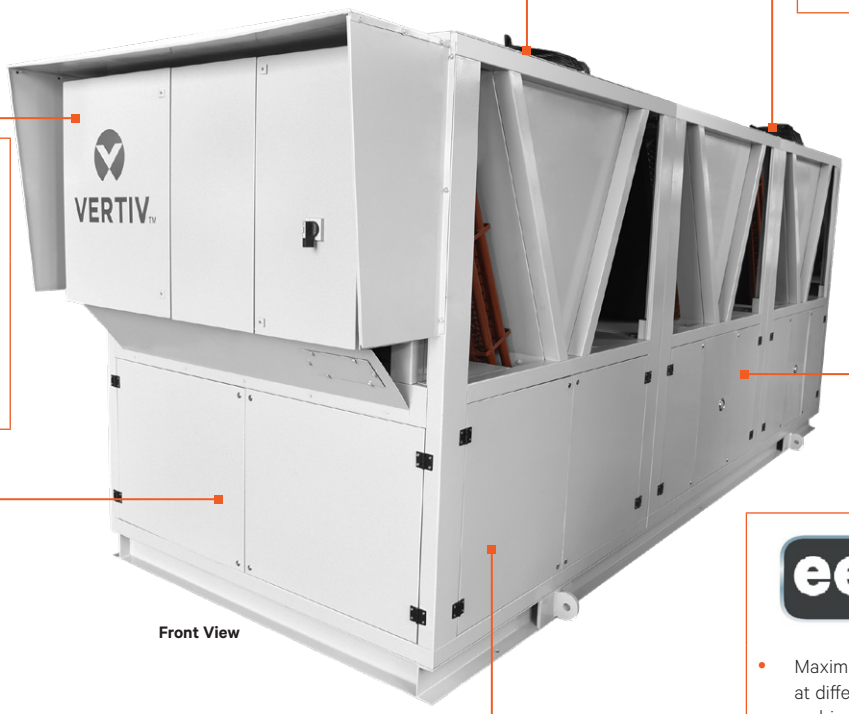
Liebert® PCC Scroll Technology Maximizes Benefits for Data Centers

Minimized Noise Level

- High-efficiency fans (optional: EC fans)
- Integrated aerodynamic design

EC Fan

Variable speed feature provides uniform airflow over the condenser coils, thus EC fan allows high energy savings



Front View

Intelligent Controller

- Real-time multi-tasking operating system
- MODBUS communication is available as a standard option

Energy Efficiency

- Maximum energy efficiency at different loading & ambient conditions
- Equipped with scroll compressor, EEV, intelligent controller, guarantees high efficiency
- Elevated chilled water temperature

Hydronic Package

- Integrated hydronic package makes chiller as a single unit
- Helps saving space and easy to monitor and maintain

Adaptability

- Wide range of operation features, both at lower and higher external conditions with different setpoints.
- Multiple setpoints for chilled water temperature
- Allows maximum free-cooling
- Quick response to dynamic loading

Liebert® PCC Scroll Technology Maximizes Benefits for Data Centers

Quick Restart Time

- Fast start ramp ensures immediate restoring of chiller operation after restart
- Achieves 100% capacity in 90seconds
- Assured stable chilled water temperature

Rear View

High Reliability

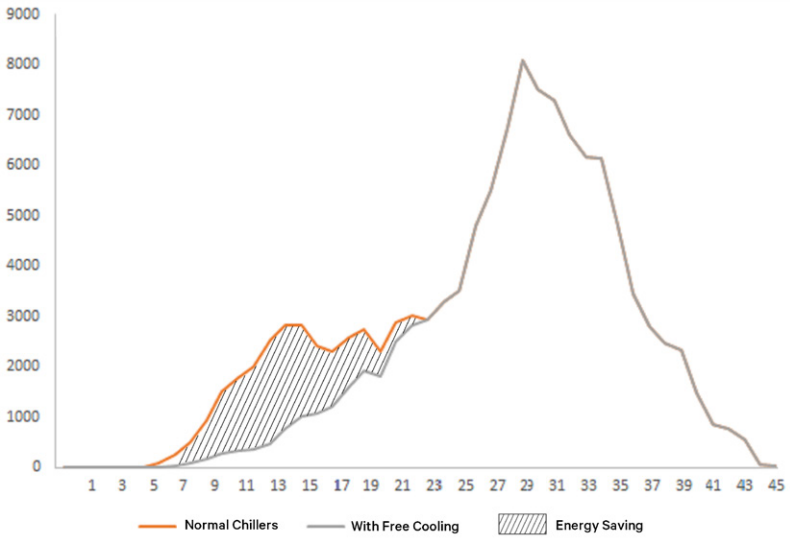
- Innovative chiller design enables 24x7 operation
- Safe and reliable design guarantees operation in the most diverse working conditions

Inrush Current

Soft start reduces the inrush current

Liebert PCC Scroll Helps to Achieve Your Business Goals while Respecting the Environment

Today, environmental responsibility for most organizations is becoming increasingly fundamental. The Liebert PCC Scroll guarantees increased efficiency for customers while reducing environmental impact through its ability to work in different operating modes of sole direct expansion to free-cooling. The free-cooling operation takes advantage of the external environment conditions in order to cool water, thus requiring compressor operation only when the outside temperature exceeds free-cooling limits.



Liebert PCC Scroll Annual Energy Consumption: A Wide Range of Energy Efficient Solutions

A data center with 100 kW load in Delhi is considered for an example - the annual energy saving of the Liebert PCC Scroll Air-cooled free-cooling version operating at 23 °C to 18 °C chilled water temperatures would be 17% higher as compared to the other free-cooling unit operating at the same conditions. Energy savings would boost to 15% when compared to the air-cooled chiller version that works at 15 °C to 10 °C chilled water temperatures.

Technical Specifications

AG Series		AG0080	AG090	AG0150	AG0180	AG0210	AG0300	AG0350
Cooling Capacity*	kW	68.5	86.3	137.0	172.7	205.5	274.0	345.3
Total Power input*	kW	21.5	27.3	42.2	53.3	63.9	84.6	106.6
Unit EER*	kW/kW	3.19	3.16	3.25	3.24	3.21	3.24	3.24
Noise Level‡	dB(A)	76.0	76.0	77.0	77.0	77.0	78.0	78.5
Dimensions								
Depth	mm	2275	2275	2275	2275	4200	6150	6150
Width	mm	2100	2100	2100	2100	2100	2100	2100
Height	mm	2660	2660	2660	2660	2660	2660	2660
Weight	kg	1960	2490	3960	4980	5920	7920	8720

**. At the following standard conditions: power supply 400 V / 3 Ph / 50 Hz; outdoor temperature 35 °C; water inlet/outlet temperature 12 °C / 7 °C; ethylene glycol 0%.*

‡. Measured at outdoor temperature of 35 °C; 1 m from the unit; free field conditions.

†. At outdoor temperature of 35 °C; calculated free field conditions.

AB Series		AB0080	AB090	AB0150	AB0180	AB0210	AB0300	AB0350
Cooling Capacity*	kW	66.6	84.1	133.2	168.3	199.9	266.5	336.5
Total Power input*	kW	21.6	27.8	43.6	55.5	64.6	87.3	107.8
Unit EER*	kW/kW	3.08	3.03	3.05	3.03	3.10	3.05	3.12
Noise Level‡	dB(A)	77.0	77.0	78.0	78.0	78.0	79.0	79.5
Dimensions								
Depth	mm	2275	2275	2275	4200	4200	6150	6150
Width	mm	1900	1900	1900	1900	1900	1900	1900
Height	mm	2660	2660	2660	2660	2660	2660	2660
Weight	kg	1660	2490	3960	4980	5030	6730	7410

**. At the following standard conditions: power supply 400 V / 3 Ph / 50 Hz; outdoor temperature 35 °C; water inlet/outlet temperature 12 °C / 7 °C; ethylene glycol 0%.*

‡. Measured at outdoor temperature of 35 °C; 1 m from the unit; free field conditions.

†. At outdoor temperature of 35 °C; calculated free field conditions.

AF Series		AF0080	AF090	AF0150	AF0180	AF0210	AF0300	AF0350
Cooling Capacity*	kW	92.2	117.2	184.4	234.3	276.6	368.7	468.7
Free Cooling Capacity§	kW	60.0	60.0	60.0	120.0	120.0	120.0	120.0
Total Power input*	kW	21.3	27.8	41.9	54.3	63.5	83.2	108.6
Unit EER*	kW/kW	4.32	4.22	4.40	4.31	4.35	4.43	4.31
Noise Level‡	dB (A)	76.0	76.0	77.0	77.0	77.0	78.0	79.5
Dimensions								
Depth	mm	2275	2275	2275	6150	6150	8100	8100
Width	mm	2100	2100	2140	2100	2100	2100	2100
Height	mm	2660	2660	2660	2660	2660	2660	2660
Weight	kg	2000	2530	4000	5060	6000	8000	8800

*. At the following standard conditions: power supply 400 V / 3 Ph / 50 Hz; outdoor temperature 35 °C; water inlet/outlet temperature 20 °C / 15 °C; ethylene glycol 0%.

‡. Measured at outdoor temperature of 35 °C; 1 m from the unit; free field conditions.

†. At outdoor temperature of 35 °C; calculated free field conditions.

§. Free cooling at outdoor temperature of 7 °C; calculate free field conditions. Chilled water inlet/outlet 20 °C/ 15 °C.

Vertiv.com/en-in | E-mail : marketing.india@vertiv.com | Toll free : 1-800-2096070

Vertiv Energy Private Limited | **Plot C-20, Rd No.19, Wagle Ind Estate, Thane (W), 400604. India**