VERTIV.™

Liebert®

LPC

Nurturing Every Breath of
Today's Precision Equipment

Vertiv, formerly Emerson Network Power, designs, builds ,and services mission critical technologies that enable vital applications for data centers, communication networks, and commercial & industrial environments

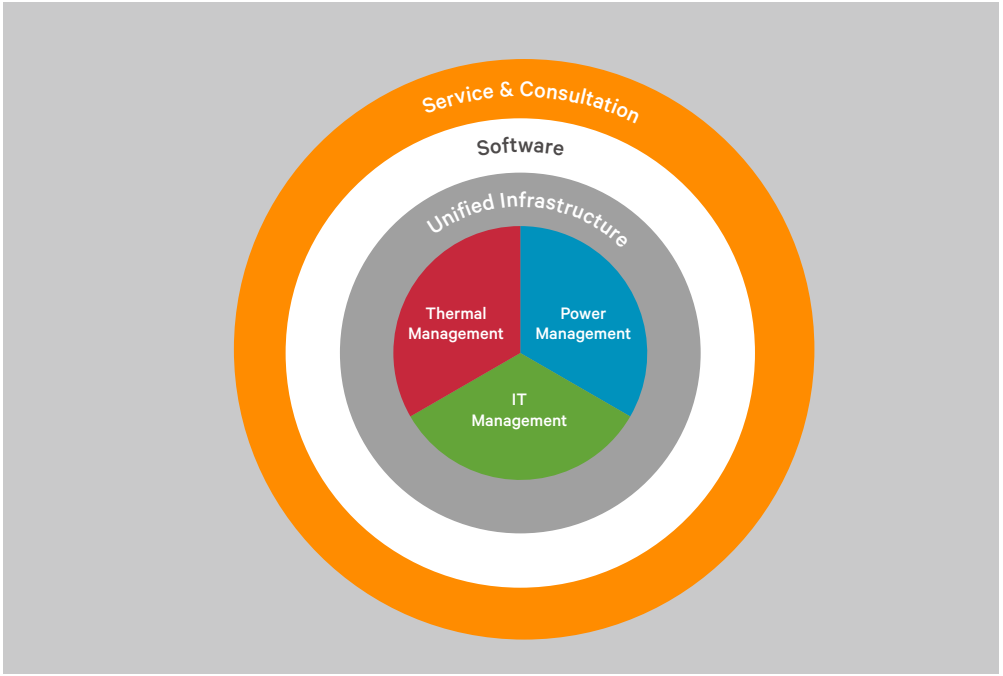
We support today's growing mobile and cloud computing markets with our portfolio of power, thermal and infrastructure management products, software and solutions, all complemented by our extensive global service network.

We help strengthen the world's most vital applications by bringing together global reach and local knowledge, and our decades-long heritage, including brands like ASCO, Chloride, Liebert, NetSure, and Trellis.

Vertiv

Your Vision, our Passion

With a unique combination of industry expertise, technology, and resources, our mission is to support and power mission-critical technologies that drive possibility.



ASCO ®

Our global critical power switching, control, and management solutions, engineered to the most demanding specifications, ensures power, reliability, compliance and efficiency

Chloride ®

Our global industrial power solutions meet the most demanding technical specifications and provide safe, reliable power- no matter the challenge

Liebert ®

Our global power and thermal management solutions are some of the world's most efficient and reliable power and cooling technologies

NetSure ™

Our global intelligently engineered DC power systems deliver high availability, energy efficiency, and scalability for converged networks

Trellis ™

Our industry-leading software gives customers an integrated view of operations across IT and facilities resources, enabling better decisions that save time and money

Testing is a process that involves repetitive examination and evaluation of products according to the industry standards and norms to assess product performance.

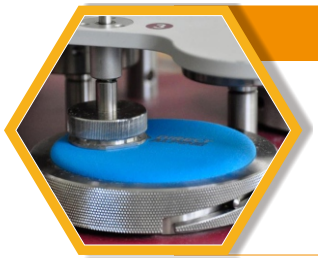
Scores and studies reveals precise result is key contributor of testing facilities irrespective of nature of applications.

Paper Making:

Testing and quality checks include the tensile test, tear test, thickness of paper, brightness, and whiteness of paper to mention a few. Very tight tolerance in temperature and relative humidity are required.

Tobacco:

The Tobacco industry conducts several rigorous and highly analytical tests and of them Flue gas analyzing, Tipping paper test, Tow Lab & Filter test labs are main. Tolerance band in temperature & humidity are different as per labs but over all average is +/-1 deg C & +/-3% RH.



Textile:

Several checks and tests are conducted for different parameters such as woven structure, count of yarns, color fastness, fabric quality and robustness. International standard suggest 65%+/-3%RH to carry out test procedure.

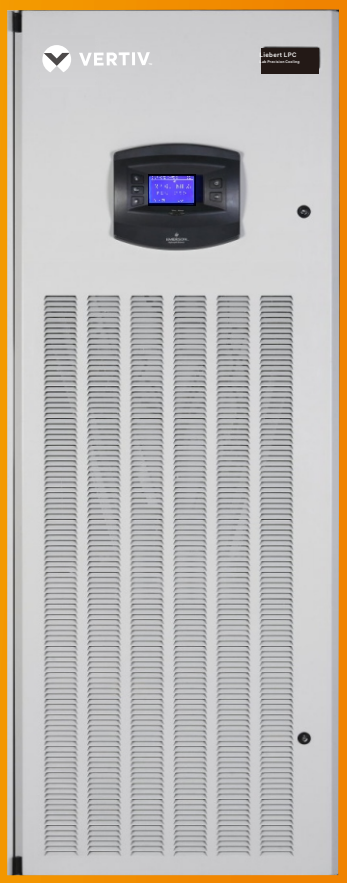
Measuring Lab:

Research data or results are very specific and should be accurate while publishing. Indoor environment with special temperature & RH profile are essential to execute such precise experiment.

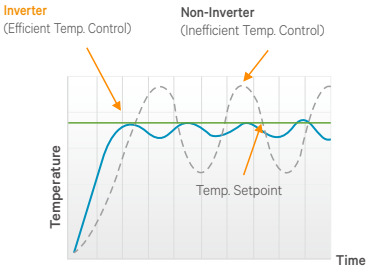
Museum/Archives:

Special design towards relative humidity is essential to keep good quality of preserved objects; the best way to achieve is to keep tight control of RH (+-5%), dust particle and also other parameters like air flow, air movement & close tolerance of indoor temperature.

Features

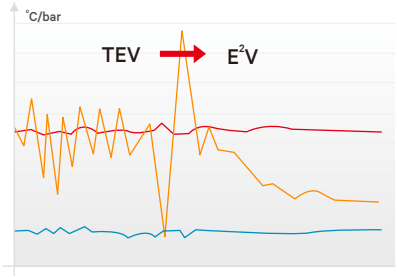


Liebert LPC



The brushless DC motor is inherently more efficient than an AC motor and is designed to be speed modulated.

Constant modulation according to sensible load helps tight control on temp & RH; also more energy efficient



Necessary for integrated and optimal control of the variable capacity.

Maintain constant superheat & additional help in dehumidification

Liebert.LPC Constant Temperature and Relative Humidity (temperature precision is up to±0.5°C, and humidity precision is up to ± 2%RH)

Power failure auto-restoration function and high/low voltage protection function.

Maximum 3~5 remote sensor can be controlled

EC fans are highly efficient, maintenance-free and have an easy AUTOMATIC speed control.

The fan modulates together with the compressor to have greater efficiency and control flexibility.

Reliable, Available, Precision

- Compact design for easy move and install at site.
- Asia's first standardized constant unit for special application
- Satisfy the requirement for CE certification
- Regulation of Sensible Cooling Capacity down to Zero
- Use of variable technology at every steps like compression, distribution & controls
- High quality, perfect harmonized component
- Precise & Reliable control system
- Service available through out Asia Pacific

Intelligent solutions for special application

In various testing laboratories, research labs, museum, archives, the temperature and relative humidity need to be kept constant to ensure correctness of test result and to provide good care of sensitive equipment.

With its new Liebert LPC unit, Vertiv offers a solution to take care of inside precise environment even during no load/low load condition.

Today's Precision Equipment

Precise Control for maximum reliability

To ensure high degree of accuracy in testing result, a high reliable solution is offered by Liebert and it comes with very precise control & efficiency.

Not only intelligent controller, precise control is equipped in Liebert LPC at every steps like electronic expansion valve, inverter compressor, EC fan and this precision mechanism also coupled with green technology that makes the solution more efficient.

A reliable, constant solution

Check your technical specification

In our state-of-art, test center with various climate chambers, we carry out variety of test on Precision AC solution.

This allows you to have desired parameter of Liebert LPC tested according to technical specification.

Also, component level precise measurement can be carried out as per given specification.

Tested, constant solution

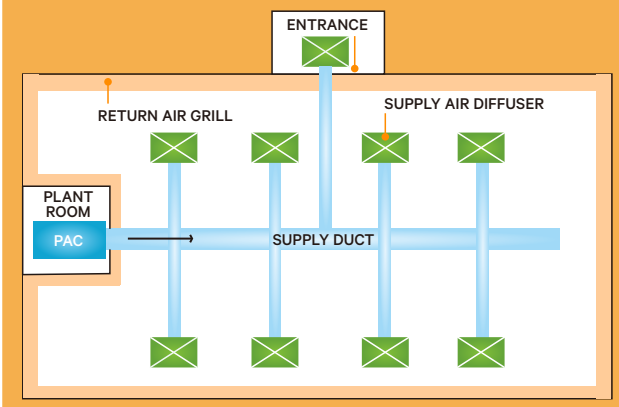
Precise Precision Cooling Vs Precision Cooling: the difference that matters

IT/Data Centre Cooling Solution		LAB Precise Cooling Solution
Temperature Control : +/- 1°C	*Get Ready for "Add More Value"*	Precise Temperature Control : +/- 0.5 °C
Humidity Control : +/- 5%RH		Precise Humidity Control : +/- 2%RH
More Air Flow to address more heat density		Optimized Air flow @ low velocity
Designed to work 24*7		Designed to work towards constant environment
High Reliability		High Reliability with the highest accuracy
Multiple Network Connectivity Options		Connectivity Options with multiple Sensors
Variable & Modulating technology : Optional		

VALUE PROPOSITION → OPTIMIZED VALUE PROPOSITION

Factors needs to be taken care by vendor :

- Do not allow fresh air; if fresh air cannot be avoided, then it has to be handled with utmost care using precautionary measures
- Supply air velocity to a maximum of 4.5 m/s. This will result in a favorable environment leading to higher accuracy in testing.
- Streamline the air distribution design to allow factors such as laminar flow to be followed
- Special care on air carrier material selection
- It is a good practice to place the Precision air conditioning unit in a separate plant room but closer to conditioned place
- Optimized degree of inclination for the air vane so that the specimen used in testing not affected



Factors needs to be taken care by Customer :

- Treatment for the Walls : Need to use such material for vapour barrier effect resulting in high degree of isolation in the changing inside conditions.
- Treatment for the Ceiling: Stretched polystyrene material needs to be used to provide insulation for the ceiling. This prevents any kind of heat ingress from the upper floor.
- Treatment for the Floor: The flooring for the lab should be done with Ceramic tiles to avoid vapor migration from below.

Technical Specifications
Liebert® LPC™

SYSTEM FEATURES	
Temperature Accuracy	+/- 0.5 deg C
Relative Humidity Accuracy	+/- 2% RH
OUTPUT CAPACITY	
Cooling Capacity	15 kW
Standard Airflow	5100 CMH
Cooling Modulation	30% - 100%
Electric Heater & Capacity	0 ~ 100% SCR finned tube heater & 9 kW
Humidifier & Capacity	Infrared & 5 kg/hr
PHYSICAL CHARACTERISTICS	
Dimensions (H x W x D), Weight	
Indoor unit	1975 mm X 845 mm X 730 mm, 280 kg
ENVIRONMENTAL	
Operating Temperature	18 °C to 35 °C - Indoor & -15 °C to +45 °C Outdoor
Storage Temperature	-25 °C to +55 °C
Safety Compliance	CCC - L1015U & CE- L1015U-E

Liebert® LPC™ is Ideally suited for

- Metrological Laboratory
- Educationcal & Research Laboratory like TEM Lab etc
- Textile Testing Laboratory
- Transformer Stations & Substations
- Laboratories, Test Room & Storage Room

OVERVIEW

1. Accurate Temp & RH
2. Inverter Scroll Compressor
3. Green Refrigerant
4. EEV, EC Fan
5. SCR Heater

ECO AVAILABILITY
High level of green technology availability and Efficiency

MORE PRECISION
High degree of accuracy at inside parameter

FLEX CAPACITY
Regulation of capacity down to zero

TESTED & RELIABLE
Intelligent controls & component makes provides high reliablity

VertivCo.com | Asia Pacific

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