



Liebert®

PEX™ (R410A)

High Efficiency, Green Solution
Precision Cooling for Data Centers



WE ARE VERTIV

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.

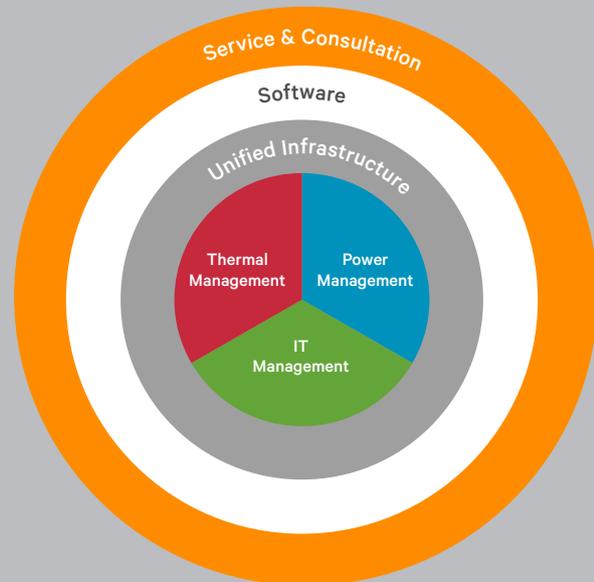
We help strengthen the world's most vital applications by bringing together global reach and local knowledge, and our decades-long heritage, including brands like Chloride, Liebert, NetSure, and Trellis.



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.



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

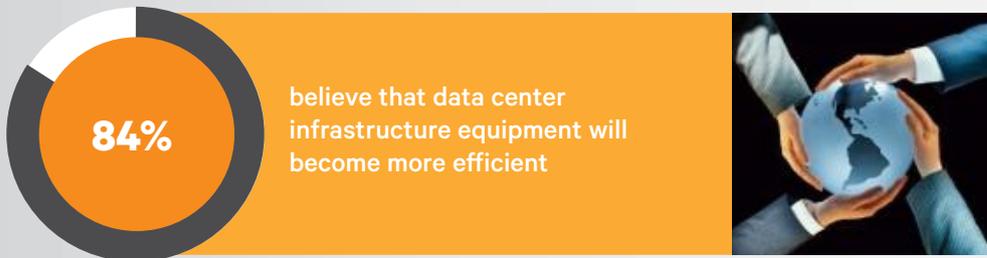
NetSure™

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

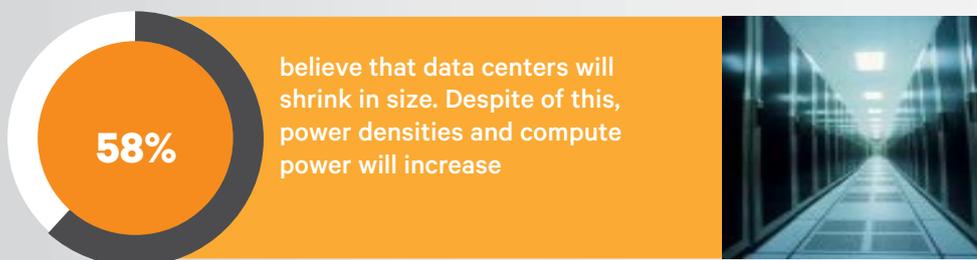
Trellis™

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

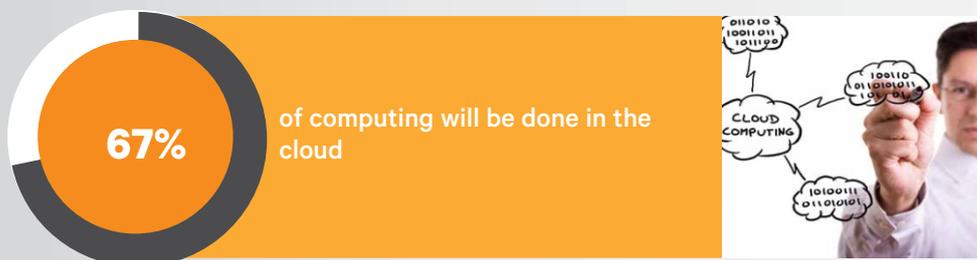
What will the future of the data center look like? Following our Data Center 2025 survey, here's what we found:



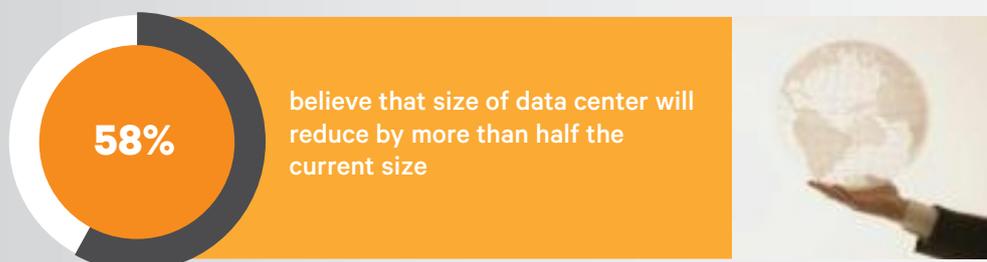
Is your data center operating at peak efficiency?



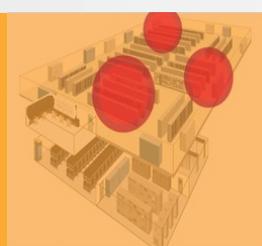
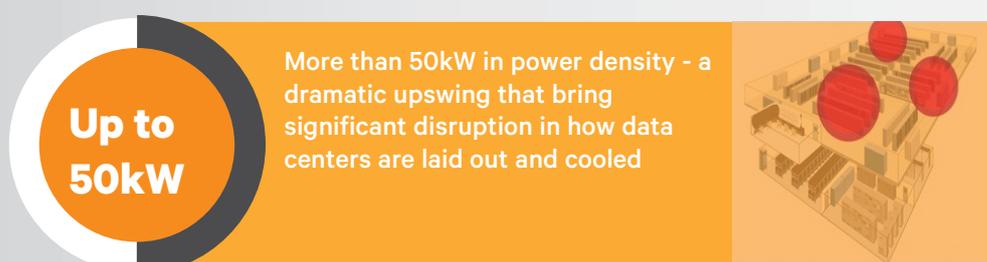
Is your data center's thermal solution equipped to handle high heat densities?



Is your data center prepared for next-gen computing technologies?



Is your data center cooling system compact ?



Re-evaluate your existing strategy to focus on new cooling methods and approaches

Vertiv's next-generation thermal management solution, uniquely designed to give you the highest levels of efficiency at a lower operating cost, along with green refrigerant

The data center landscape is changing. Innovations such as cloud computing, Big Data and Internet of Things are transforming the way the data center operates. Faced with high power densities and computing requirements, data centers must always perform at the highest levels of efficiency and availability, minimizing downtime or outages.

We at Vertiv understand the evolving nature of your business and so we evolve with you. Our latest thermal management solution, the Liebert® PEX™ (R410A series), features next-gen cooling technologies that gives you the highest levels of efficiency and availability at a small footprint along with environment caring solution.

The Liebert® PEX™'s modular design also gives you the flexibility and convenience unlike other cooling solutions. It is also compact and easy to install, adapting to the changing demands of your business.

The Liebert® PEX™ offers the perfect combination of availability, efficiency, modularity. It is available in both DX and water cooled variants.

The Liebert® PEX™ with R410A series offers an refrigerant that having zero ozone depletion potential, an environment friendly solution

Liebert® PEX™ (R410A series) Cooling Unit delivers Efficiency without Compromise

Efficiency Without Compromise provides a path to optimize data center infrastructure around design, operating and management efficiency while maintaining or improving availability.



ECO AVAILABILITY
Balancing high levels of availability and efficiency



High DENSITY
Delivering high power in lowest footprint



FLEX CAPACITY
Adapting to IT changes for continuous optimization and design flexibility



INFRASTRUCTURE MANAGEMENT
Improving performance of the IT infrastructure and environment

Liebert® PEX™ Key Features



Energy efficiency

First class energy efficiency is achieved through combination of industry's best practices



Infrared humidifier

Latest technology, fast responsive Infrared humidifier helps maintain the humidity to desired level



24/7 Service offering

Vertiv supports customers with the extensive service offering, guaranteeing availability and total peace of mind 24/7



iCOM Controller

Smart mode is a control algorithm developed for SmartAisle™ applications (cold aisle containment) meeting the cooling and airflow needs of the servers without wasting a single Watt on unnecessary cooling or air movement.



Electronic Expansion Valve

This valve is designed to constantly optimize the refrigerant circuits performance in order to achieve the highest efficiency also at partial loads. EEV can be offered based on application demand.



Liebert® EC Fan

The unit is fitted with direct-driven, high efficiency, single inlet, backward curved, centrifugal 'plug' type innovating EC fan(s). The EC fan technology regulates airflow and reduces the fan input power. In-floor configuration further reduces energy consumption in downflow units



Green Refrigerant

With the relatively high density and high efficiency of R410A, it is possible to reduce the size of system components such as condensers, compressors, evaporators and piping, etc. Environment friendly as R410A has zero ozone depletion potential



Digital Scroll Technology

Energy saving by variable capacity system allows maximum load tracking for higher efficiency; improved reliability by reducing compressor cycling & component wear, and to improved performance the compressor can easily adapt to changing load conditions, providing precise temperature control

FEATURES THAT MAKES DIFFERENCE



Close Control

Precision cooling technology differs substantially from classical comfort air conditioning.

Air conditioning units dedicated to dissipate the heat generated by electronic equipment in data centers, computer rooms, technology environments in general have to meet very specific design paradigms as well as guarantee compactness, efficiency, reliability, ease of maintenance, interfacing with centralized monitoring systems.

The range of products is capable of satisfying different requests and the highest number of applications, thanks to the plurality of versions, configurations, and to the massive list of options and accessories

With the help of digital compressor, EC fan, latest controller "Precise Precision" is attainable & also guarantee for lower power consumption.

Green Refrigerant

The use of the eco-friendly refrigerant R410A is particularly advantageous: the best parameters for limiting the greenhouse effect, a reduced fluidcharge, as well as high performance in terms of heat exchange, thanks to the excellent thermodynamic characteristics of the gas.

Variable Technology

During modern IT era, computation pattern has been changed to variable in nature thus IT load patterns also demand modulation in capacity & control. PEX (R410A series) offers truly variable technology such as:

Digital compressor: Modulating 20% ~ 100% capacity and also saves 25% energy than static version

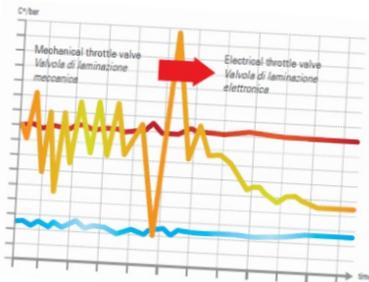
EC fan : Liebert 2.0 EC fan modulates fan speed according to load density; thus saves almost 30% energy consumption

EEV : As an option PEX R410A series also offers electronic expansion valve (EEV) that results fast & precise regulation of refrigerant flow, speed in attaining set parameter. The advantages in terms of savings of the power absorbed by the compressor are tangible even with temperatures that are not necessarily "severe".

Total Connectivity

The control software allows interfacing with all the most well known BMS (Building Management System), guaranteeing the connection with any centralized management system, thanks to Liebert iCOM.

Advance technology based ® Liebert iCOM™ controller acts as the brain of the precision cooling system, delivers the optimum performance according to varying load conditions, resulting in big savings in operating cost.



Technical data of PEX (R410A series) down flow & upflow Air-cooled unit (with fixed & digital scroll compressor)

Model	P1030	P1040	P1050	P2060	P2070	P2080	P2090	P2100
Gross Cooling capacity and Sensible cooling capacity (kW)								
Cooling capacity*1 (24 °C DB 50%RH)	35.7	46.0	53.2	71.4	79.9	92.1	96.0	106.4
Sensible cooling capacity (24 °C DB 50%RH)	31.4	39.9	47.2	63.2	71.5	79.8	85.6	94.4
Indoor unit Fan section								
Std Air volume (m ³ /hr)	8000	10500	12200	16000	18000	21000	22600	24400
Fan number	1	1	1	2	2	2	2	2
Fan power (kW)*2 - Downflow	1.8	1.52	1.91	3.59	4.76	3.04	3.3	3.82
Fan power (kW)*2 - Upflow	1.93	1.8	2.28	3.85	5.15	3.59	4.01	4.55
Compressor*3								
Number	1	1	1	2	2	2	2	2
PTC type Electric heater								
Power (kW)	6	9	9	9	9	12	12	12
Infrared humidifier								
Humidifying capacity (kg/h)	4.5	4.5	4.5	10	10	10	10	10
Unit Footprint								
Unit dimension (W*D*H) (mm)	1130 X 995 X 1975	1330 X 995 X 1975	1830 X 995 X 1975	2230 X 995 X 1975				
Indoor Unit Weight								
Net weight (kg)	436	470	535	690	730	770	808	838

Note :

1. Performance tolerance 5%
2. For net capacities, deduct fan input power. Refer to the Liebert[®] PEX™ (R410A series) Rating for specific input conditions, air flow, and configuration.
3. *1 : The above cooling capacity is based on condensing temperature of 45°C.
4. *2 : For downflow unit ESP 20 Pa & for upflow unit ESP 50Pa considered
5. *3 : R410A refrigerant is used; both fixed scroll & digital scroll can be offered
6. Standard offer is with TXV, EEV is available on request
7. Water cooled condenser can be offered on request
8. If you need any data, not listed; please contact with Vertiv representative



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