

Rittal – The System.

Faster – better – worldwide.

Rittal LCP+ EC closed loop configuration

LCP+ EC—closed loop configuration

The LCP+ EC uses chilled water to help dissipate heat and provide cooling directly at the rack level. Its closed-loop configuration removes heat coming off hardware components without moving it into the data center — eliminating hot spots and providing for optimal operation.

The complete system is scalable and designed to become a vital part of high-performance data centers as they are developed, expanded or modernized. Today's energy-conscious designers and data center managers can apply this proven system to reduce cooling energy consumption — and cost — by as much as 30 to 45 percent.

Today's higher density rack loads have increased the demand for efficient, consistent cooling. Unmanaged heat can lead to equipment failure, which means costly downtime.

LCP+ EC is an air-to-water heat exchanger designed to dissipate high heat loads while using higher water temperatures than are the norm—thus taking full advantage of free cooling and lowering energy costs. Its closed-loop design featuring both solid front and rear doors, maintains consistent airflow to eliminate hot spots while providing uniform cool air distribution throughout the IT load. The design maximizes heat transfer efficiencies and eliminates the need for a hot aisle, providing dynamic control of the cooling process.



The Rittal Advantage:

Reduce Cooling Energy Requirements	Chilled water temperatures from 45°F to 70°F; maximizing cooling efficiency using 59°F cooling water (warmer than industry standard)
Generate Energy Cost Savings	Take advantage of natural cooling by increasing free cooling, opening water-side economizing window
Lower Energy Demand	Reduce energy consumption by as much as 30 to 45 percent
Efficient Cooling	Cool multiple enclosures with varying levels of heat load
High Capacity Cooling	Capacity to as high as 44kW; airflow at 3,000 CFM; maximum water flow at 17 GPM
Electronically Commutated (EC) fans	Six standard hot swappable EC Fans reduce energy demand, increase performance
Operator Control	Real-time unit monitoring standard; expanded data center monitoring available with optional RiZone software



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Part No.	3300.480	3300.485
Height inches (mm)	80 (2000)	
Width inches (mm)	12 (300)	
Depth inches (mm)	48 (1200)	
Door configuration	Solid Front/Solid Rear	
Color	RAL 7035 Gray	Sand Texture Black
Weight lb (kg)	507 (230)	

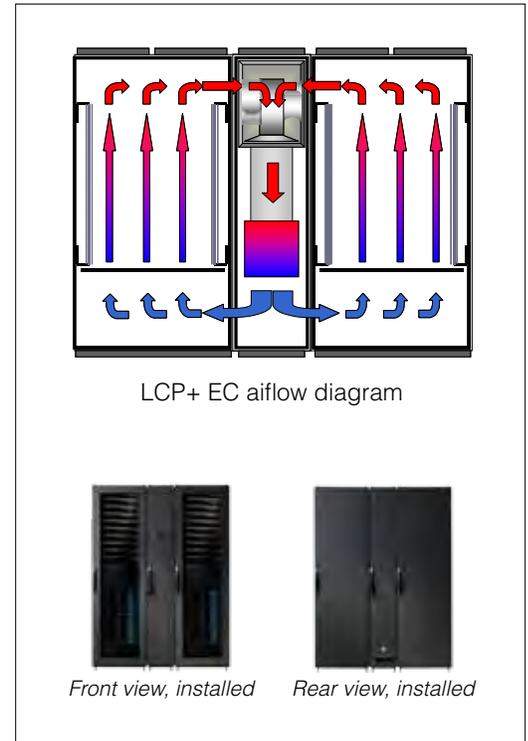
System Characteristics	
System capacity	Typical: 30 kW Maximum: 44 kW The LCP+ EC is capable of supporting multiple cabinets with a variety of heat loads. Capacity is based on the following parameters: flow rate, ΔT , and glycol percentage.

Input Specifications	
AC input voltage	208V, single-phase, 50/60 Hz 230V, single-phase, 50/60 Hz 400V, three-phase, 50/60 Hz
Chilled water supply temperature	45°F to 70°F
Maximum water flow rate	17 GPM

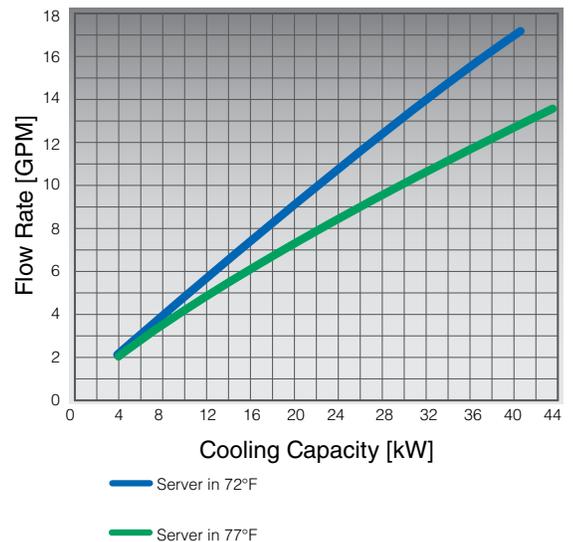
Additional Parameters	
Air flow volume	3000 CFM
Fans	6 fans, electronically commutated, N+1, hot swappable
Power consumption	5.5A, 850W at 208V 6.5A, 1050W at 230V 2.2A, 1050W at 400V
Water supply pressure	16 to 73 PSI
System noise	64 dBA (open air above reflective floor, distance 1m)
Water system connections	1" BSP external thread connection; bottom or rear connection points for chilled water supply and return lines. 5/16" condensate pump hose. 3/8" I.D. overflow drain hose.
Water supply quality	Purified cooling water. Recommend use of a fine mesh filter. No lime scale or loose debris. Low hardness and low conductivity.

Software Connectivity	
Software compatibility	Internet Browser: IE 7, Safari 4, Firefox 3, or Chrome 8 for browser-based configuration. PC: Network-enabled PC running Windows XP SP3, Windows Vista SP1, or Windows 7.
Support for multiple systems in the data center	Optional data center client/server based software package (RiZone) that provides real-time monitoring of the entire data center.

Certifications	
Certifications/Approvals	UL, cUL, CE, TUV
Country of Origin	Manufactured in the U.S.A.



Flow Rate vs. Cooling Capacity with 59°F EWT



Rittal Corporation

1 Rittal Place • Urbana Ohio 43078 • USA
 Phone: 937-399-0500 • Fax: 800-477-4003 • Toll-free: 800-477-4000
 Email: rittal@rittal-corp.com • Online: www.rittal-corp.com

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