

LCP Inline Protruding CW HD

The LCP Inline Protruding CW HD (Cold Water/High Density) can provide up to 60kW of cooling output onto components housed inside adjacent enclosures and racks. Reducing air temperature via an air-to-water heat exchanger, while protruding into the aisle — taking just 8 inches of aisle space — the unit's fans direct the airflow at a 90-degree angle so it is no longer just released into the space, it is blasted directly across the front of the servers. This configuration reduces air deflection losses and makes cool air dispersal more efficient because it is directed specifically toward the source of the heat — a “curtain” of cool air forms in front of the enclosures.

Server air temperature is moderated independently from ambient air within the data center so cooling can be adapted to the needs of individual servers or enclosures in a modular fashion. Up to six fan modules may be installed in this configuration to adapt the system's capacity to a unit's precise requirements – providing for more efficient cooling and energy use. The increased capacity is available within the same footprint as existing models — you can get 60kW cooling from a unit that's still just 12-inches wide. That's double the cooling from the same floor space — or you can reduce the number of units to free up floor space for additional hardware.

While the standard base unit includes four high-efficiency fans, Rittal's next generation LCP units are scalable by using up to six fans within the system. In addition the EC fans have been moved to the front of the units — on the cool side away from the heat generated by components — which will extend the life of the fans themselves. This unique design and ability to use the same floor space is exclusive to Rittal — making the price per unit even more competitive.



Data center row view; the LCP units are shown pulled out from enclosures farther than standard installation for illustration purposes

The Rittal Advantage:

High Performance Cooling	<ul style="list-style-type: none"> • Up to 60kW using 59°F water • Operation above dew point increases energy efficiency and eliminates condensation • Increased use of “free” cooling
High-efficiency Monitoring	<ul style="list-style-type: none"> • Server-friendly temperature monitoring • Communication via SNMP over Ethernet • Touch screen available
High-tech Fans	<ul style="list-style-type: none"> • EC fans inside cold area • Economy and Facility modes boost energy efficiency • Cooling capacity varies with number of fans • Box-type, plug-in fans can provide N+1 redundancy
Installation-friendly	<ul style="list-style-type: none"> • 12-inch wide footprint • Mechanical connections available from top or bottom • Top or bottom feed water connections • Low weight for low load on raised floor • Free access to 19-inch equipment • Raised floor or slab installation
Operational Efficiencies	<ul style="list-style-type: none"> • Equal temperature distribution throughout the rack • High Energy Efficient Ratio (EER) at the chiller



Note: Imperial measurements are approximate, metric measurements are exact.

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a technical overview

LCP Inline Protruding CW HD

Part No.	3311.568
Height inches (mm)	78.7 (2000)
Width inches (mm)	11.8 (300)
Depth inches (mm)	47.2 (1200)
Door Configuration	Solid Front/Perforated Rear
Color	RAL 9005 Jet Black
Weight lb (kg)	463 (210)

System Characteristics

System capacity kW	40kW (4 fans) / 50kW (5 fans) / 60kW (6 fans) The LCP Inline Protruding CW HD 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.
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Input Specifications

AC input voltage	208V, 2~, 60 Hz / 230V, 1~, 50/60 Hz
Chilled water supply temp.	59°F
Maximum water flow rate	37 GPM

Additional Parameters

Air flow volume	4708 CFM (6 fans)
EC Fans	4 fans (can add 2 more), electronically commutated, N+1, hot swappable
Max. power consumption	13.5A at 208V / 12.3A at 230V (6 fans)
Water supply pressure	29 to 85 PSI
System noise	77 dBA (open air above reflective floor, distance 1m)
Operating temperature	43°F to 95°F
Water system connections	1½" BSP ext. thread supply/return connection, ¾" ID condensate drain hose
Network connection	RJ45
Fill quantity	2.9 gallons (11 liters)
Water supply quality	Purified cooling water. Recommend use of a fine mesh filter. No lime scale or loose debris. Low hardness and low conductivity. Recommended pH 7 - 8.5.

Software Connectivity

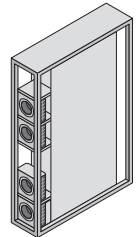
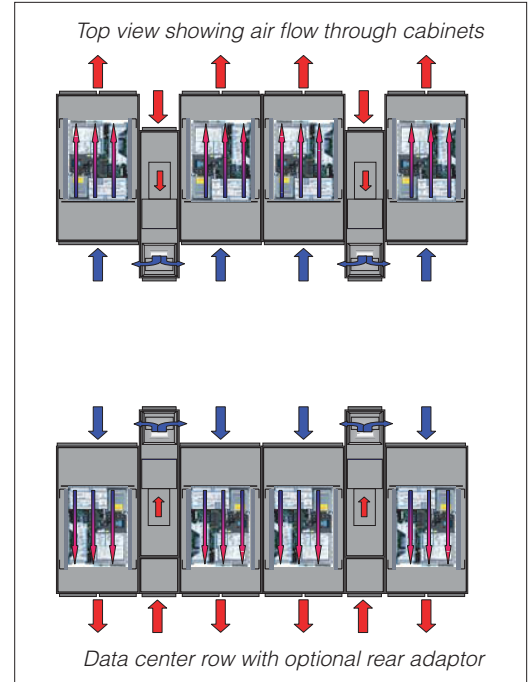
Software compatibility	Internet Browser: IE 10, Safari 6.0.5, Firefox 24, or Chrome 30.0.1599.69 (31), Opera 16, for browser-based configuration. PC: Network-enabled PC running Windows XP SP3, Windows Vista SP1, or Windows 7, Windows 8.
Support for multiple systems in the data center	Optional data center client/server based software package (RiZone) that provides real-time monitoring of the entire data center.

Certifications

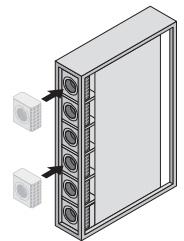
Certifications/Approvals	UL, cUL, CE, RoHS, ISO 9001/14001 certified
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Accessories

3311.030	LCP display
9977.379	LCP water connecton hose kit, 1.5" BSP to 1.5" NPT
9971.173 / 9971.174 / 9971.175	LCP 1.5" ID hose lengths - 10ft / 15ft / 25ft
3311.016	Fan module
9967.529	LCP Inline rear adapter, black



The LCP Rack CW HD ships with four fan modules



Adding two fans can increase energy efficiency in 40kW heat load applications while raising the potential cooling capacity to 60kW

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