

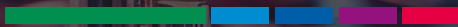
# RITTAL



PARTNER PROGRAM

## RITTAL DELIVERS PRECISION COOLING SOLUTION FOR HIGH-DENSITY SEMICONDUCTOR MANUFACTURER

### SNAPSHOT



A large semiconductor manufacturer successfully cooled high-density servers with Rittal LCP climate control solutions.

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# INTRODUCTION

In the intricate world of semiconductor manufacturing, precision is paramount. When a large semiconductor manufacturer faced the challenge of cooling 12 high-density loads at 53kW per rack and three at 30kW per rack for their semiconductor fabrication and production, Rittal stepped in with a targeted solution.



## THE CHALLENGE

The goal was clear: cool the enclosures, not the entire room. The installation space couldn't accommodate the higher heat loads associated with the semiconductor production process. Add to that a demand for high cooling efficiency as well as a solution that could be installed with minimal lead times. Enter Rittal, which was tasked with implementing a reliable edge solution that would support the critical needs of the semiconductor manufacturing environment within a competitive time frame.

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# THE RITTAL SOLUTION

Rittal experts set to work and leveraged their extensive experience in IT infrastructure, data centers, and edge applications to address the unique cooling requirements of the semiconductor racks. Many competitor solutions would not be implemented within a timely manner, making Rittal a more attractive option. Despite longer lead times industry-wide for climate control solutions, Rittal offered a distinct advantage with shorter lead times. This ensured both a quick turnaround and a quality solution that could be depended on.

At the heart of the solution was the Rittal Liquid Cooling Package (LCP) CW Rack, a closed-loop system meticulously engineered to handle higher kW-per-rack loads commonly used in the semiconductor industry. This focused cooling solution is designed specifically for IT enclosures and utilizes water-based heat exchangers that work seamlessly within the rack and independent of the surrounding room. Cold air is confined within the rack while heated exhaust air is efficiently directed to the heat exchanger, ensuring an optimal operating environment for the installed IT appliances.

The Rittal solution included:

- 15 closed loop, 42U enclosures with sides
- 15 LCPs (12 at 53kW and 3 at 30kW)
- 84 PDUs
- 3 CDUs



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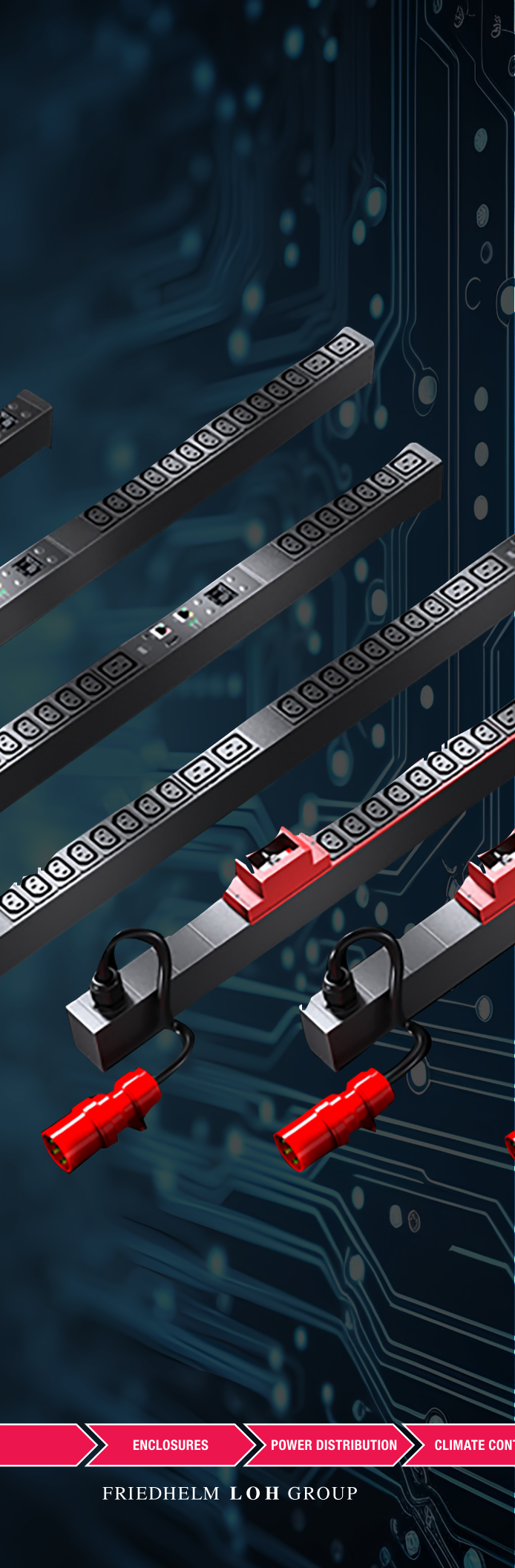
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## RESULTS

Rittal's LCP and enclosure edge solution proved to be an ideal fit for the semiconductor manufacturer as it offered a dedicated and efficient cooling solution that met critical requirements within a condensed timeline. With a dedicated, quality edge solution, the customer's data could be near-instantly utilized in the production space for maximum efficiency. The implementation of LCPs allows for the direct cooling of each rack with excellent heat dissipation, which maximizes energy savings and optimizes IT operations. This approach empowered the customer to efficiently cool their IT spaces without relying on traditional, less efficient room-cooling solutions. In essence, Rittal's LCP solution provided a simple, plug-and-play installation that precisely cooled each individual rack, all while keeping energy costs to a minimum and matching the customer's specific application and requirements.

## CONCLUSION

Rittal's commitment to delivering precision solutions for complex cooling challenges shines through in the successful implementation of the LCP and enclosure solution for our semiconductor manufacturing partner. Our commitment to providing dedicated, efficient, and highly available solutions that meet the unique requirements of our customers is what sets Rittal apart from the competition.

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## CONTACT RITTAL TODAY FOR HIGH-EFFICIENCY IT COOLING SOLUTIONS

If your business is facing similar challenges in your industry and requires a precision cooling solution for data center or edge applications, contact Rittal today. Our team of experts is ready to collaborate with you and offer industry-leading solutions that enhance efficiency, optimize operations, and ensure the success of your critical projects. Join the ranks of those who have experienced the Rittal advantage—where precision meets innovation.



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