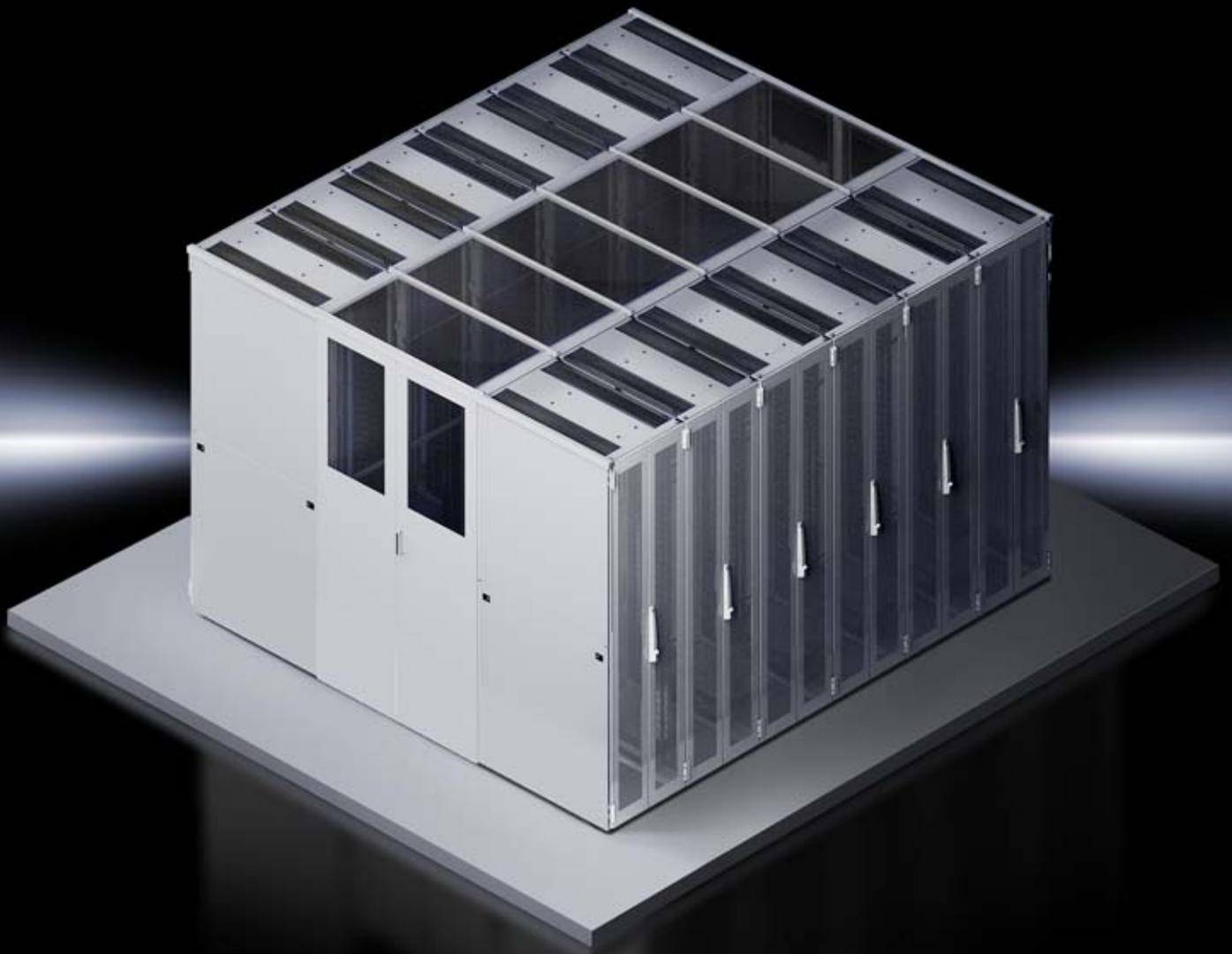


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## ► **Technical System Catalogue** **Aisle containment**



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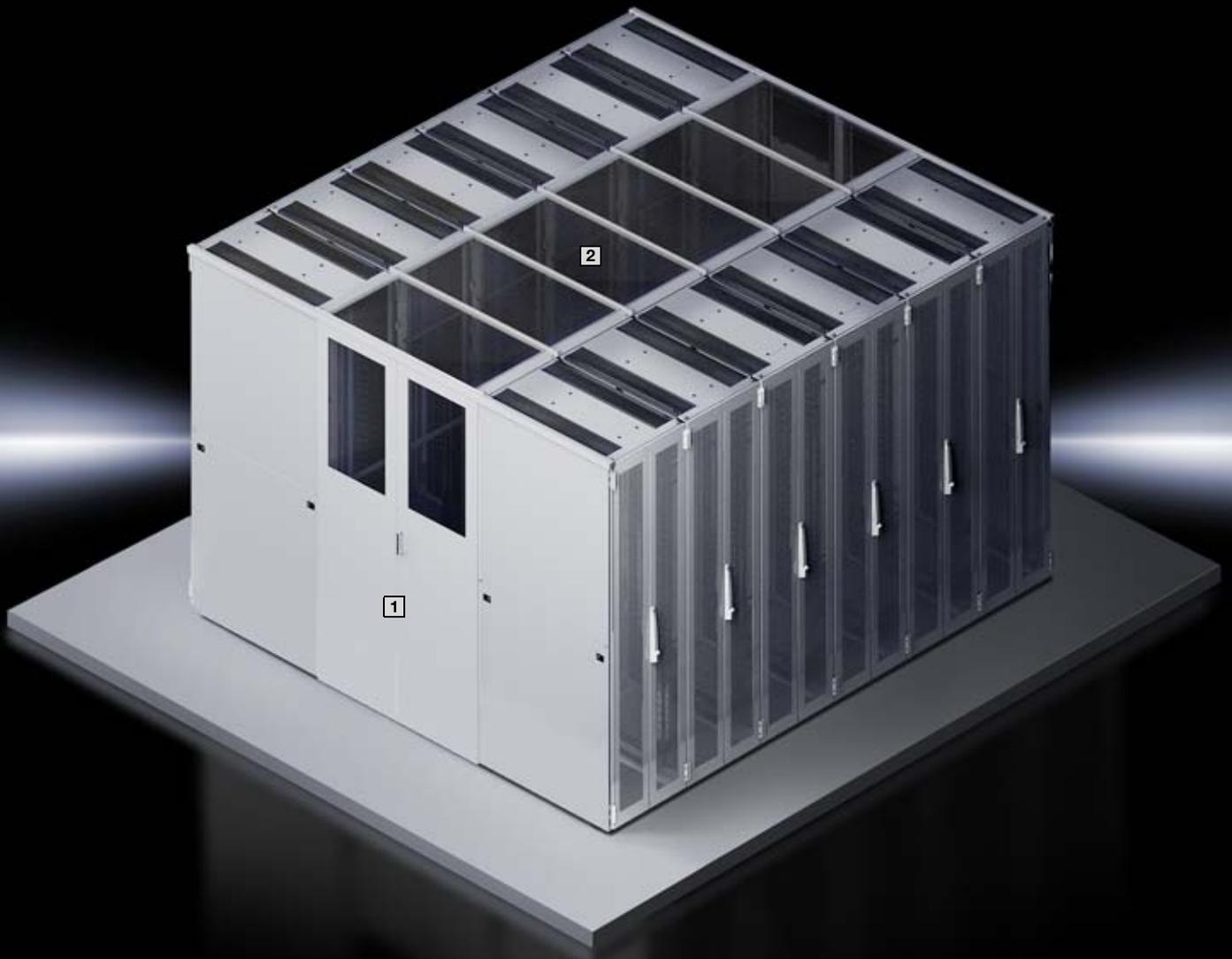
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# Aisle containment



In server rooms that have not been designed as data centres, the permanent mixing of cooled and heated air often leads to cooling deficits. Hot spots make the IT equipment's work more difficult. In order to efficiently ensure the necessary cooling, Rittal has developed three cooling variants for aisle containment. Two solutions use containment of the cold aisle, while the third is based on hot aisle containment.

- 1** Door element with viewing window and sliding door
- 2** Robust roof elements in a composite material with a high level of light permeability

# Aisle containment

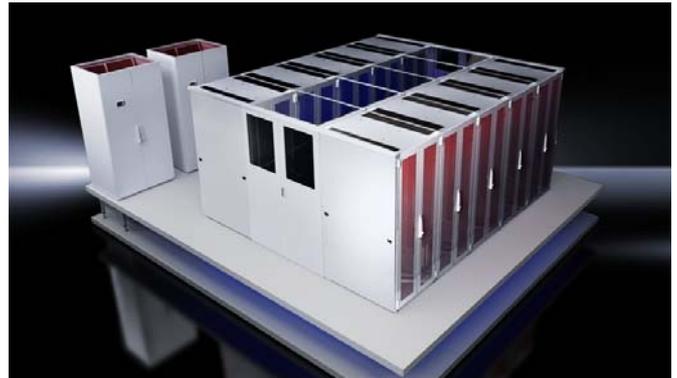
## Benefits at a glance

- Intake air (cold) and waste air (hot) are unable to mix.
- It is possible to operate at a higher temperature level throughout the entire system.
- LCP Inline and CRAC systems operate with maximum energy efficiency thanks to the greater difference between hot and cold air temperatures
- Modular, scalable and upgradable
- Simple arrangement
- An inexpensive solution for the optimum cooling of existing data centres

## Cold aisle with raised floor

CRAC systems supply cooled air into the cold aisle via the perforated panels of the raised floor.

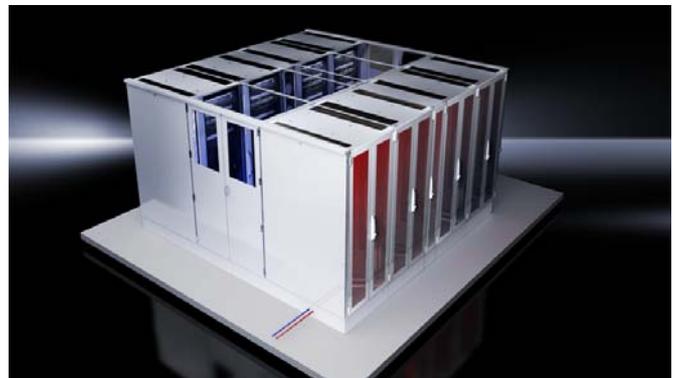
- Even with low room heights, the raised floor height is maximised for cooling air supply without flow losses
- Undisturbed and uniform air flow distribution of cooling air in the cold aisle guarantees high efficiency
- Favourable working conditions in the cold aisle due to low temperature, flow and noise load conditions
- Hardware racks not connected to the enclosure do not impair the cooling efficiency of the cold aisle
- Use of inexpensive standard CRAC cooling units sited outside of the server area



## Cold aisle without raised floor

LCP Inline CW delivers the cooled air directly to the rack fronts in the cold aisle.

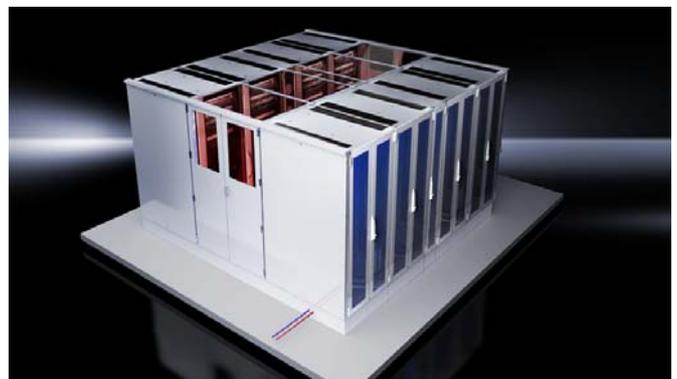
- Direct connection of the liquid cooling packages to an external cold water supply
- Simple laying of pipework in the rack base/plinth
- Homogeneous distribution of cooling air in the cold aisle guarantees a high level of efficiency
- Favourable working conditions in the cold aisle due to low temperature, flow and noise load conditions
- Hardware racks not connected to the containment system do not impair cooling efficiency via the cold aisle
- Room heights play only a minimal role



## Hot aisle without raised floor

The LCP Inline CW extracts the hot air directly at the point where it is created. The cooling performance of the cooling units is utilised to optimum effect, and the overall efficiency of the system increases significantly.

- Simple assembly using the existing components of Rittal aisle containment
- Direct connection of the Liquid Cooling Packages (LCP Inline CW) to an external cold water supply
- Simple routing of the piping via the rack base/plinth
- Suitable for use with high heat losses
- Room-neutral dissipation of the heat loss



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