

Case Study

weisstechnik and the dissipation of heat loads in a Data Center

WHY

High heat load
[2.5 kW each m² IT surface],
special room height [8 m]

HOW

Suction in the ceiling area,
supply via false floor,
efficient cool wall system

WHAT

Weiss wall system CoolW@ll® 300.4,
separate air shaft,
modular individual components

WHY - The Challenge.

EMC HostCo GmbH in Munich rents data centers to Internet Service Provider [ISP] and industrial customers in suits of approx. 500 m² [Colocation]. A high energy density with a heat load of 2.5 kW per m² IT surface and a room height of 8 m are decisive for the choice of the cool wall system.



HOW - The Idea.

To make best use of the room height, the hot exhaust air is sucked in the ceiling area of the server room. Cooled air is led to the cold aisles between the racks.

The cool wall system optimally integrated into the room is working with maximum efficiency if on the one hand the air is deflected or constricted as little as possible and, on the other hand, there is low pressure drop at the heat exchangers and filters.

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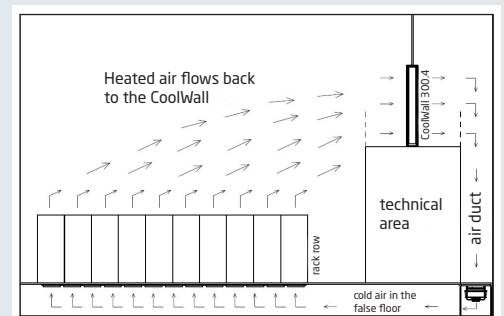
WHAT - The Solution.

Due to the modular design the heat exchangers and fans of the chosen cool wall system can be installed independently. The extremely high efficiency of the system with lowest energy consumption ensures profitability.

The heat exchanger modules are arranged on the technical rooms and integrated in the separating wall provided by the customer so that additional place in the server room is hardly needed and the room height is optimally used.

Chosen product: CoolW@ll® 300.4

The fans are separately arranged in an air shaft behind the engineering room, the energy consumption is kept at lowest possible level. The air is directly led into the false floor without any further deflection so that the total PUE value has been improved.



Implemented Modifications

Separate arrangement of individual components:

- Installation of heat exchanger modules above the technical rooms instead of ground level to the IT surface
- Arrangement of fans in a separate air shaft behind the technical room

