



Hans Lehmann, senseLAN GmbH

SenseLAN builds on Minkels Vertical Exhaust Duct

Clever concept and excellent product quality result in a PUE value of 1.15

About senseLAN

Together with Rega-Sense AG, senseLAN GmbH is a regional fibre optic network provider of quality services in the TV, Radio, Internet, Telephony, Hosting and Server Housing sectors. Thanks to redundant connectivity with different carriers, the backbone delivers the highest possible

availability. Technical partners with years of experience and excellent professional knowledge personally look after more than 10,000 private and 500 commercial customers. That pays off. SenseLAN AG is proud to have satisfied customers that have been with them for many years.

ENERGY EFFICIENCY DEPENDS ON CLIMATE CONTROL SYSTEM

Data centres consume a lot of energy. Up to 30 percent of this energy is used for cooling their infrastructure. Therefore, it is worthwhile to pay particular attention to the climate control solution. The latest addition to the Minkels VariCondition® Portfolio is a Vertical Exhaust Duct VED placed on top of each rack. In Switzerland, senseLAN GmbH began implementing this Minkels VED cooling concept in 2015 and is realising an astounding PUE value of 1.15. It was a good move from an

environmental perspective and it has reduced the company's costs significantly.

SenseLAN GmbH is a service provider that offers 1000m² of floor space in two data centres in the Canton of Freiburg. While planning the expansion of the infrastructure, it became clear to Hans Lehmann, owner of senseLAN, that Minkels VariCondition® VED had to be incorporated in the expansion: "Minkels is in a league of its own when it comes to quality. Their products are first class and their service, from offer to assembly, is outstanding."

VARICONDITION® VED: FLEXIBLE, EASY TO INSTALL AND READY FOR THE FUTURE

SenseLAN decided against raised floors in its data centre because moisture is regulated over the concrete floor. The ceiling is 3.30 metres high and the energy efficiency targets were very ambitious. This was a case for VariCondition® VED! The extendable version bridges a height of 300 to 1600 millimetres between the rack and the suspended ceiling without any mechanical attachments. A rubber sealing mechanism provides an airtight connection, the vertical air

duct on the back of the rack routes the warm air to the central cooling unit, and the precision climate control system that fully separates cold and warm air regulates the temperature accurately to the degree. This ensures that every server in the rack receives air of the same temperature so that the sensitive technology can be operated economically, while providing high availability.

VariCondition® VED can be implemented with racks of different widths and depths. However, in order to achieve a high level of efficiency, all the components must interlock seamlessly. Only the use of Minkels products guarantees maximum air optimisation and energy efficiency. With up to 2250m³ of hot air exhaust per hour, Minkels has racks with a heat output capacity of up to 25 kW. At this time, the average heat output required is up to eight kW; therefore, with the VariCondition® VED, customers are well-prepared for the future.

A WELL THOUGHT-OUT TOTAL CONCEPT THAT IS GOOD FOR THE ENVIRONMENT

SenseLAN attaches great importance to the

environment. Therefore, the data centre has been designed accordingly. With an outdoor temperature beginning at 15 degrees, outdoor air is used for cooling and energy is generated from 100% renewable energy sources, such as the solar energy system with 65 kW of power. What's more, the heat generated by the server equipment is recycled and used for heating the entire industrial and commercial centre next door. This saves about 100,000 litres of heating oil and 195 tons of CO₂ each year. Operating costs are reduced, which benefits the customers: the more efficient the data centre, the lower the energy bill.

For the heat recycling system to work correctly, the hot and cold airflows must be completely separated. Therefore, Hans Lehmann puts his trust in Minkels: "We are ISO 14064 certified, precision is our credo. Everything is sealed tight with Minkels, their advice is excellent, deliveries are on time and the installation is perfect. Our data centre is a real gem!" ■