

Air-conditioning in building services applications



SAP Data Centre, St. Leon-Rot

As market leader of enterprise software, SAP SE supports companies of all sizes and in all sectors in operating their business profitably, continuously adapting to changes and growing sustainably by collaborating more efficiently and using business information more effectively than the competition.

Customers: more than 291,000

Headquarters: Walldorf, Germany

KSB SuPremE® IE4* motor: the decisive advantage

High levels of availability and reliability are top priorities in data centres. In addition to absolute data security and a reliable power supply, this also includes fail-safe and energy-efficient air-conditioning. This varies according to server utilisation and is adjusted to cater for the various loads by means of pumps equipped with a variable speed system. The entire data centre is monitored using intelligent control systems. When it came to choosing a supplier to provide the pump technology required, the supplier of choice was KSB. The pump and valve manufacturer impressed with an optimally matched system of pumps, valves and automation products. The in-house developed world class KSB SuPremE® motor is ideal for changing requirements – and when paired up with an intelligent speed control system, exceeds the efficiency offered by an IE3 motor when it comes to part-load ranges.

When compared with IE3 motors, the high-efficiency motor not only achieves energy savings of 73% but also boasts a space-saving design as PumpDrive is mounted directly on the KSB SuPremE® motor. This means that the complete pump set requires just a small installation area. Furthermore, PumpDrive is matched to the pump before it leaves the factory, making it ready for immediate operation.

To eliminate downtime during day-to-day operations, the concept accommodates a time-saving containerised system. The air-conditioning system has been fitted as a cube solution in containers installed on the roof. The tasks of planning and monitoring the challenging project were assumed by Zimmermann & Partner, and the role of plant engineering and construction was handled by ENTEGA Gebäudetechnik in Darmstadt.

To ensure optimum control of pump operation and utilisation, SAP capitalised from highly efficient units. This involved combining the KSB SuPremE® motor and the PumpDrive variable speed system with the PumpMeter intelligent pressure transmitter. Thanks to its ongoing operating point estimation, this

ensured even more precise speed control. It was mounted in an accessible position that allows data to be read and downloaded quickly and easily.

As a full-range supplier of pumps, valves and automation solutions, KSB provided 413 valves and 24 pumps as well as tailored services and the comprehensive concept needed to boost system efficiency.

More information

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*IE4 in accordance with IEC (CD) 60034-30 Ed. 2



Scope of supply

Pumps
8 Etabloc GN 125-200/1104 G11 SuPremE® and PumpMeter
4 Etabloc GN 150-315/3004 G11 SuPremE® and PumpMeter
8 Etabloc GN 125-250/2204 G11 SuPremE® and PumpMeter
2 Etaline GN 050-160/074 G11 SuPremE® and PumpMeter
2 Etaline GN 050-160/114 G11 SuPremE® and PumpMeter

Valves
340 BOAX-SF with gearbox DN 32 – DN 400
24 BOAXMAT SF DN 80, 200, 250
24 SERIE 2000 DN 150 – DN 250
11 BOA-S DN 80, DN 200, DN 250
14 BOA-Control IMS DN 80 – DN 200

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ZP Zimmermann & Partner
Ingenieurbüro für Gebäudetechnik



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