Rittal – The System.

Faster – better – everywhere.

Xylem cuts operating costs with Rittal Blue e+ cooling units

CUSTOMER REFERENCES

IT infrastructure

xylem
Let's Solve Water

Customer: Xylem Services GmbH, Germany
Industry: Fluid technology
Company size: more than 12,500 employees worldwide
Established: 2011
Headquarters: New York, USA

Ozone ensures clean water, both when purifying drinking water and when treating waste water. It is produced in special systems that use electrical discharge – a process that requires large amounts of electrical energy. One of the world's leading manufacturers of ozone water treatment plants is Xylem Services GmbH, based in Herford, Germany. It forms part of the Xylem Group with more than 12,500 employees worldwide. The systems from Herford are marketed worldwide under the "Wedeco" brand name. Since the energy costs arising during operation are relatively high compared to the investment costs, Xylem places a lot of emphasis on high energy efficiency. Xylem relies on (wall-mounted) "Blue e+" cooling units from Rittal for cooling switchgear.

“Rittal can supply the enclosures and compatible cooling technology with a high level of reliability.”

Ludwig Dinkloh,
Manager Global Product Management at Xylem

THE PROJECT

The Challenge

- High energy efficiency for cooling of switchboards
- Savings of energy costs

The Solution

- Rittal TS 8 enclosures
- Two Rittal Blue e+ devices (6 kW each)

Power electronics needs cooling

Ozone production needs electrical energy – a system that produces 1 kilogram of ozone an hour consumes approximately 5 to 6 kW of electricity. The current system for a chemicals factory in Taiwan can produce up to 20 kg of ozone an hour and thus has a total connected load of over 100 kW. The power loss of such a system, which is converted into heat in the enclosures, is around eight percent. To protect the components in the enclosure from high temperatures, the Rittal TS 8 enclosures installed for the electrical engineering system are additionally fitted with two cooling units from Rittal’s new Blue e+ series, each with a cooling output of 6 kW.

Operating costs are far lower

Cooling units in the Blue e+ range have much higher energy efficiency than predecessor models. In particular, hybrid operation with a combination of heat pipe and compressor cooling can bring about very high energy savings for partial loads. Cooling is configured for an enclosure temperature of 35°C and an external temperature that is also 35°C. At lower outdoor temperatures, the cooling units require much less energy. Added to this is the fact that compressor cooling is also energy-optimised. The high energy efficiency and associated savings in operating costs for the customer are a major advantage of the Xylem systems, which run practically 24/7. If the enclosure cooling consumes 2 kW less power, this soon results in a five-figure sum for energy that the customer can save over the lifetime of the system at 8,500 operating hours a year.

Multi-voltage capability is an advantage for fast delivery

Multi-voltage capability is especially important for international companies such as Xylem. Whether a system is being supplied to the United States, Japan, Mexico, the UK or Germany, the cooling units are compatible with the specific mains voltages available. In the past, Xylem had to either install a suitable cooling unit for the specific mains voltage or use an additional transformer. In international business operations, the UL listing for cooling units is also particularly important. The formalities and regulations for approval vary according to where the system is installed. International availability of components and corresponding service/supply of spare parts are also important to Xylem. And with an international supplier such as Rittal, they do have a skilled local contact partner.

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