

## Güntner goes green

The air-conditioning in Güntner's new server room, which was completed at the end of last year, uses our own highly energy-efficient equipment. Since the company's continual growth had already exhausted the capacity of their existing infrastructure, it had become necessary to set up a completely new data centre at the company's headquarters in Fürstfeldbruck. Alongside the new installations it was also planned to expand the existing capacity for emergency power supplies and air conditioning to meet Güntner's growing demands.



The installed drycoolers are from Güntner's GFW series.

<b>Line of Business:</b>	Air conditioning
<b>Application:</b>	Server room cooling
<b>Country / City:</b>	Germany / Fürstfeldbruck
<b>Fluid:</b>	Glycol (34 %)
<b>Product:</b>	Drycooler GFW, Güntner Motor Management GMM EC

The capacity of the existing server room urgently needed to be expanded. To be well prepared for the future, the company set up a completely new and larger server room in the converted basement of the administration building, but air-conditioning the new room was beyond the capacity of the existing air-cooling system. In implementing the new cooling concept, Güntner paid particular attention to finding a solution that was as energy-saving as possible: yet another reason to use our own products...

## Newly-built basement server and utility rooms

Since the company did not wish to spoil the look of the existing administration building façade, the necessary refrigeration plant, pumps, piping, measuring devices, control and automation equipment, switch cabinets, etc. were distributed between different parts of the building.

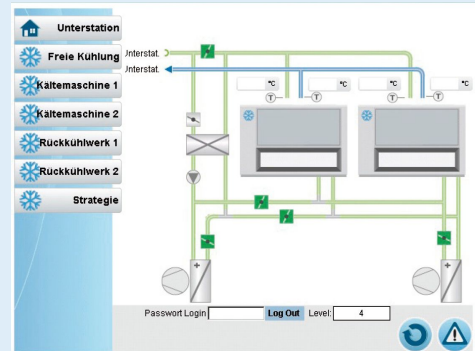
For example, a new reinforced concrete basement utility room was constructed to house the pumps and storage tanks. The drycoolers selected from Güntner's GFW series were placed on the roof of the production facility, with the refrigeration plant on a new steel platform inside the facility. The pipes connecting the production facility to the administration building were installed underground.

### Cold water storage tank as backup

The cooling system for the server room is now protected in two ways: The cooling circuit is operated using R134a, and, in case that the system should ever fail, waste heat from the servers can be dissipated in an orderly fashion via two cold water storage tanks. Other safety equipment includes an automatic gas fire extinguishing system, UPS systems to cover possible power failures, and redundant provision of the cooling systems' principal components.

### Energy-efficient control system

To maximise its energy efficiency, the entire installation is controlled automatically, naturally also using Güntner's own products. Here the choice of equipment focused on its facilities for monitoring the systems' energy data, plus transparent functions and operating procedures. The quiet, energy-efficient EC fans are therefore operated using Güntner's GMM EC motor management system. Energy-related system data is passed to the higher-level control unit via Modbus. There the data is evaluated and visualised in the higher-level web-based operating system, thus facilitating impeccable energy management.



Web interface for the operation and visualisation of the plant, facilitating an energy-efficient handling of the plant

The system automatically switches to free cooling in winter if the outdoor temperature drops to 10 °C or lower. This further reduces operating costs and protects the environment. At a later date, it is also planned to use the waste heat to heat the production building.