



## **AN IDEAL PACKAGE**

### **CHALLENGE**

#### **THE GRAFSCHAFTER VOLKSBANK BRINGS OLD AND NEW TOGETHER**

As a cooperative bank, the Grafshafter Volksbank feels that it has a particular duty to its customers and members. However, the management always keeps the welfare of its 371 employees and, last but not least, its responsibility for its location in mind, especially during the extension of its headquarters in Nordhorn.

The design, which comprises several buildings, means that the construction project is of great importance for the entire southern Emsland region. Lindschulte Ingenieurgesellschaft, the general partner, once again decided to use modern YANMAR gas motor heat pumps. The result is exemplary, not least with regard to profitability and environmental protection.



**SOLUTION**

**HEAT PUMPS FOR HEAT, COOLING AND FRESH AIR**

As part of the project, the headquarters building was completely refurbished and combined with two former residential buildings and one newly constructed building to form a single unit. As regards construction technology: the entire usable floor space of over 3,000 m<sup>2</sup> is serviced by a system based on three YANMAR gas motor heat pumps. One heat pump provides the hot and cold air for the air conditioning system. Its engine waste heat is also used for heating the incoming air in the dehumidifying system. The two other heat pumps supply air to the buffers of the heating and cooling system through the KKU hydroboxes. They can easily operate in different modes during transitional periods.

**OUTCOME**

**OPTIMAL COMPANY CLIMATE AND OUTSTANDING RESOURCE EFFICIENCY**

One exposed concrete building from the 1970s, two town houses and one new building to connect them all – the new headquarters of the Graftschafter Volksbank are an architectural gem. The forward-looking building technology is another highlight. The requirements of the German Energy Saving Ordinance (EnEV) and the German Renewable Energies Heat Act (EEwärmeG) are easily met thanks to natural gas-operated heat pumps. As a result, the volume of gas consumed for heating and cooling the old headquarters building, for instance, has dropped by almost two thirds to around 111,000 kWh/a. This corresponds to an annual saving of EUR 10,000!

**OVERVIEW**

<b>Project:</b>	Graftschafter Volksbank eG
<b>Products:</b>	3x gas motor heat pumps 2x KKU hydroboxes 3x RLT-DX kits
<b>Refrigeration-capacity:</b>	3x 85 kW
<b>Heating capacity:</b>	3x 95 kW (plus 30 kW motor heat recovery unit)
<b>Construction area:</b>	5,000 m <sup>2</sup>
<b>EnEV:</b>	✓
<b>EEwärmeG:</b>	✓
<b>Savings:</b>	37%
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**YANMAR**

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