



## **OPTIMAL WORKING TEMPERATURES FOR THE GLOBAL LEADER**

### **CHALLENGE**

#### HEAT AND COOLING FOR A MODERN TECHNOLOGY CENTRE

Many global leaders are barely known outside their own industry. Maschinenfabrik Bernard Krone in the Emsland region of Germany is one of these 'hidden champions'. This manufacturer of agricultural machinery is, as part of the Krone Group, represented on five continents, and holds a leading position in the global market thanks to its top quality and innovativeness.

The company has constructed a new technology centre for around 500 employees at its headquarters in Spelle, Germany. Lindschulte Ingenieurgesellschaft, a long-standing partner of KKK, was responsible for the planning process. This challenging project was also implemented thanks to YANMAR's highly efficient gas motor heat pump technology.



## **SOLUTION**

### **A HIGHLY EFFICIENT ENERGY SYSTEM ALL YEAR ROUND**

The new technology centre comprises 8,000 m<sup>2</sup> of ultra-modern office space. A powerful system comprising six gas motor heat pumps with one KKU hydrobox each and a total heat and cooling output of 420 and 460 kw respectively creates pleasant temperatures. One of the heat pumps is fitted with an additional heat exchanger, which makes integration into mixed systems particularly straightforward. Engine waste heat can thus be used as free energy for heating and hot water during transitional periods.

## **OUTCOME**

### **AN IDEAL CLIMATE FOR FURTHER INNOVATIONS - AN A NEW PARTNER**

Lindschulte regularly uses KKU heat pump systems for designing efficient, competitive building solutions. This successful cooperation is continued in the new Krone technology centre, which easily meets all requirements of the German Energy Saving Ordinance (EnEV) and the German Renewable Energies Heat Act (EEWärmeG). With its reliable and modern working methods, Gebr. Willers, the local contractor, has also clearly proven itself as a partner for further joint projects – a win-win situation for everyone!

## **OVERVIEW**

<b>Project:</b>	Maschinenfabrik Bernard Krone GmbH, Spelle
<b>Products:</b>	6x gas motor heat pumps 6x KKU hydroboxes
<b>Refrigeration-capacity:</b>	460 kW
<b>Heating capacity:</b>	420 kW
<b>Construction area:</b>	8,000 m <sup>2</sup>
<b>EnEV:</b>	✓
<b>EEWärmeG:</b>	✓
<b>Competition:</b>	Lindschulte Ingenieurgesellschaft GmbH, Gebr. Willers GmbH & Co. KG