

# FEZ

**enercret energy piles provide energy independence and lower heating and cooling costs at the new Reserch & Development Centre (RDC) of the Zahnradfabrik Friedrichshafen**



**Zahnradfabrik  
Friedrichshafen AG**  
Friedrichshafen–Germany

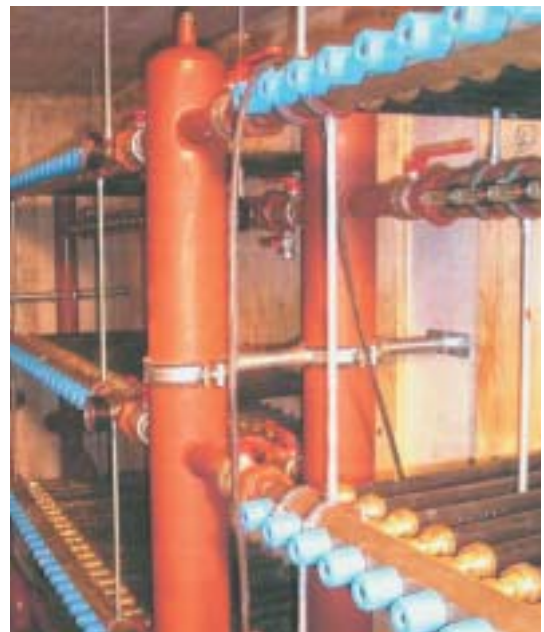
## **enercret Installation**

The extension of the RDC rests on a concrete piled foundation which reaches between 13 and 25 metres into the ground. 320 of these piles are used as absorber piles. They are fitted with 45 km of plastic piping which is used to circulate water. In the winter thermal energy is extracted from the ground via these water circuits and fed into the heating system via the heat pump. In the summer when direct cooling is not sufficient, the heat pump is used as a refrigerator unit. It produces cooling water for the chilled ceilings in the offices. The cooling water has a temperature of roughly 19 °C. The condensation heat from the refrigerator plant is dissipated into the ground via the absorber piles and stored.

Calculations have shown that the additional investment of EUR 153,000 will be paid back within 4 years at the most.

## **Capacity of enecret Installation:**

Cooling capacity	654 kW
Heating capacity	544 kW
Annual cooling output	790 MWh
Annual heating output	642 MWh



Manifold