



COFELY REDUCES ENERGY CONSUMPTION AT UNIVERSITY HOSPITAL AACHEN.

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Industrial air conditioning saves up to 50 % energy by using QUANTUM.

The University Hospital Aachen is an immense building complex not only housing the university's clinics but also the entire faculty of medicine, dentistry and numerous research institutes. Being one of the first public buildings in North Rhine-Westphalia to opt for the use of the new technology, it entrusts COFELY REFRIGERATION's QUANTUM technology with the facility's air conditioning. And with success: energy costs for industrial air conditioning could be reduced by 50 %.

RELIABLE COOLING PERFORMANCE

About 6,000 people work in the 34 clinics, 20 institutes and the administration that make up the University Hospital Aachen. The central Operations Department has over 27 operating rooms at their disposal. In addition, there is also a centre for out-patient operations. Every year around 43,000 in-patients and 135,000 out-patients are treated. An average of 900 babies are born here each year. Clearly, reliable industrial air conditioning plays an

Technical Data

- Cooling performance: $2 \times 1,800 \text{ kW}$
- Vaporizer cold water: $T_E/T_A 12/6 \text{ }^\circ\text{C}$
- Liquefier chill water: $T_E/T_A 26/32 \text{ }^\circ\text{C}$
- Operation weight per 8,000 kg

References

Rhoental Clinics
University Hospital Saarbruecken
University Hospital Ludwigsburg
District Hospital Loerrach
University Hospital Karlsbad
Bad Krozingen Heart Centre
University Hospital Hanover North
Helios University Hospital Berlin
OKM Markgroeningen
Klinikum Bamberg
LKH Feldkirch (Austria)
Bruderholz Hospital (Switzerland)

important role. QUANTUM guarantees continuous cooling through its ample construction of multiple magnetic-bearing turbo compressors.

FREE OF FLUCTUATION AND VIBRATION

Hospitals and research institutes use highly sensitive technical equipment that does not tolerate electrical fluctuation. The gentle and graded start up of the compressor produces no electrical peaks. Through the use of the magnetic-bearing technology, minimum noise and vibration is emitted – essential for every hospital.

EMT TOLERANCE

The electromagnetic tolerance (EMT) is of utmost significance for a hospital. By using QUANTUM, the University Hospital Aachen chooses reliability: through the use of EMT filters, the sensitive medical equipment is protected against electromagnetic disturbance.

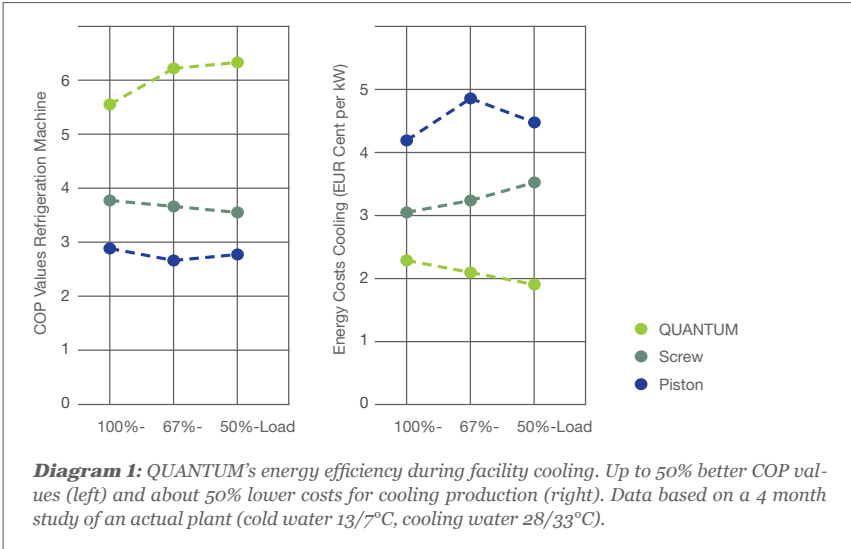
COFELY
GDF SVEZ



“Here in Aachen, we have been working with COFELY REFRIGERATION’s cooling process technology and service to our mutual satisfaction since 2003. COFELY REFRIGERATION presented a system design using QUANTUM that convinced us in regard to expected low operating costs and efficient cooling. Further extensions of the system are planned.”

Günter Parsch, Engineer
 Department 03: Hot Water/Steam/Heating and Cooling Applications
 University Hospital Aachen Technical Center

Comparison of COP values



ADVANTAGES OF QUANTUM-TECHNOLOGY

The University Hospital Aachen chose QUANTUM technology because it:

- lowers operating costs up to 40 %
- uses EMT filters to protect against electromagnetic disturbances
- has a low energy start up without electrical peaks and fluctuations
- cools reliably due to the multiple compressor construction
- operates oil-free
- emits minimum noise and vibration

DELIVERY

Ready for operation on delivery, QUANTUM was comprised of a compact cooling unit with a total capacity of 3.6MW using the environment friendly refrigerant R134a. Service included dismantling and disposal of the old system in accordance to regulation as well as the implementation of the new system to the existing pipes with installation of additional cold water pumps.

Customer

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Location

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Contractor

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