

QUANTUM-IT

COMPUTERS KEEP ALWAYS COOL.
WITH QUANTUM REFRIGERATION.



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BUILDING SERVICES	ENERGY SERVICES	FACILITY SERVICES	REFRIGERATION
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QUANTUM

ELECTROMAGNETIC COMPATIBILITY – A MUST-HAVE FOR INFORMATION TECHNOLOGY

A high quality EMC solution is used to filter and shield effectively electromagnetic interferences generated by the refrigeration systems. That means that the Quantum chiller can be installed in all critical and sensitive areas.

EXTREMELY LOW START UP CURRENT BELOW 5 A

The start up current of each Quantum chiller is less than 5 A. The stability of the electrical supply network is hence maintained and the availability of all power outlets in emergency backup supply mode is ensured.

INTRINSICALLY SAFE MACHINE CONCEPT

With its heat exchanger design and oil-free turbo-compressor, the Quantum is designed in a way that prevents the system from exceeding the maximum allowable operating pressures of the heat exchangers, even at the highest operating temperatures. Leak-proof and ready for operation, this intrinsically safe configuration means that the Quantum does not need safety valves to comply with the applicable EU regulations.

UNINTERRUPTIBLE COOLING SUPPLY IN CASE OF POWER LOSS

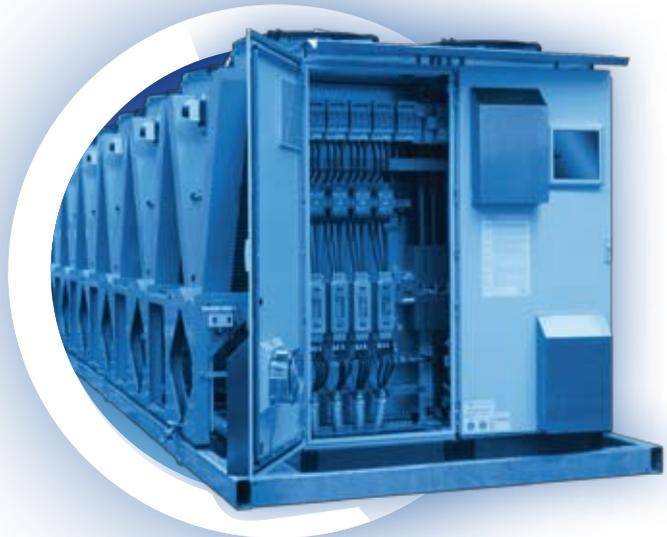
Quantum chillers can be optionally equipped with an uninterruptible power supply. In case of a power loss, the unit maintains functionality switching over to an emergency operation mode. Cooling supply is assured depending on the project-specific design specifications and/or the capacity of the upstream UPS system.

COMPRESSOR SPEED CONTROL FOR STEPLESS VARIABLE PERFORMANCE REGULATION

The stepless variable speed control and the possibility of individual compressor shut-offs lead to an optimal performance regulation and adjust-

RELIABLE AND COST-EFFECTIVE WITH THE QUANTUM-IT.

The Quantum-IT from Cofely Refrigeration combines proven Quantum refrigeration technology with features of particular importance to the IT sector: reliability, scalability and cost-effectiveness in cooling. Quantum chillers are certified by TÜV Süd for use in IT/server environments and can be perfectly integrated into existing systems. No matter whether you chose the air-cooled



The air-cooled Quantum

ment to meet the specific cooling requirement while reducing the number of motors starts. Through the speed control a cos phi of 0.98 is achieved, also under partial load conditions. An idle current compensation for the chiller is technically not required.

QUIET SYSTEM OPERATION, LOW SOUND LEVELS

The non-contact compression system uses magnetic bearings and provides an impressively low sound level, practically without mechanical vibrations.

Additional noise isolation measures are generally not necessary.

OIL-FREE OPERATION

Oil-free operation offers several advantages. First, the annual efficiency is better than the one of screw-type compressor units (without oil pump, see ESEER). Moreover, the maintenance costs are lower due to the absence of oil supply and recycling. Finally, there is no need to comply with the requirements related to the oil content in the current provisions of the Water Management Act.

TIVE SERVER COOLING

Quantum (pictured on the left) or the water-cooled model (pictured on the right) – you get sustainable quality and energy efficient, eco-friendly technology focussed on customer needs, along with first class, international service from Colfely Refrigeration.



The water-cooled Quantum

SIMPLE MAINTENANCE – COMPRESSOR REPLACEMENT DURING OPERATION POSSIBLE

The modular configuration of the unit makes it possible to replace the compressor during operation without interrupting the chiller refrigeration circuit, thereby ensuring continuous cooling.

SYSTEM MANAGER: STANDALONE OR INTEGRATED

The System Manager consists of a superior control system to operate the Quantum-IT chillers with optimal effi-

ciency as a network. In the standard standalone configuration, the optimal operation point and the most efficient operation are calculated based on internal control algorithms and adjusted to the external operating conditions. The high-end version of the System Manager also integrates the use of control instrumentation to acquire data from the peripheral elements of the unit for recooling, circulation of primary and secondary media, free cooling function, etc, for maximum energy efficiency.

MODULAR MACHINE CONCEPT AND COMMERCIALY AVAILABLE STANDARD COMPONENTS

Minimal spare parts inventory requirements, direct availability, short delivery lead times and simple installation – all this saves time and money.

INDUSTRIAL PLC

The Quantum-IT uses a PLC system adapted to industrial needs with freely programmable control. This enables us to match the cooling system precisely to project-specific requirements and conditions.

OPTO-ELECTRONIC REFRIGERANT MONITORING ACCORDING TO EN 842

Current legislation requires operators of refrigeration units to check for leakage and verify leak-tightness at regular intervals depending on the quantity of refrigerant contained in the system (up to four times per year). Suitable leak detection systems can be used to reduce the frequency of these periodic checks. The use of these systems is obligatory for systems containing 300 kg of refrigerant or more, however. The air-cooled Quantum chiller disposes of an integrated leakage detection system as part of the standard equipment, so it not only guarantees the early recognition of leaks but also reduces the cost of the mandatory checks.

MADE IN GERMANY

“Made in Germany” stands for our high standards of engineering project work, vertical range of manufacture, production throughput, quality, performance and service as a guarantee of a high level of customer satisfaction.

Nuestra marca es líder en Europa en la utilización eficaz de la energía. Realizamos el diseño técnico, el suministro y el mantenimiento de edificios, instalaciones y procesos de tal forma, que todas las energías sean utilizadas de manera óptima – incluyendo la de la gente que trabaja con nosotros. De nuestros marcados conocimientos técnicos y de la colaboración estrecha con nuestros clientes nacen soluciones integrales que hacen de la eficiencia algo cotidiano.

QUANTUM

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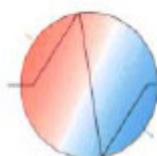
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