

RELIABLE COOLING FOR MALT-HOUSES WITH COFELY.

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Cooling in accordance to the German Beer Purity Law.

One of the biggest malthouses in Europe is the traditional Malthouse Weyermann that services over 1,600 customers in over 80 countries. With three locations in Germany, the family company produces malt, yeast and other basic ingredients for brewery and bakery needs. In 2004 a new cooling system was installed by COFELY REFRIGERATION. Despite challenging requests, a new system could be installed within a month after the first inquiry.

Technical Data

- L×W×H: 3.840×1.650×2.050mm
- max. Refrigeration capacity: 780kW
- Vaporizer: T_E/T_A 13/8 °C
- Liquefier: T_E/T_A 37,5/43,5 °C
- Cooling agent: water circulation
- Heating agent: Antifrogen L
- Start up electricity: < 5A
- Transport weight: 3,300kg

HOPS AND MALT

According to the German Beer Purity Law, malt is one of the essential ingredients besides hops and water. About 26kg of barley is needed per 100 litres of beer. The raw material is then allowed to germinate after which it is dried and sometimes roasted. This process eventually yields 20kg of malt.

CONTROLLED GERMINATION

The cleaned barley is carefully soaked in water where it swells and sprouts. During this natural process temperature rises. Exact temperature regulation keeps the barley within an optimal range for germination that is under control at all times.

ADVANTAGES OF QUANTUM TECHNOLOGY

QUANTUM combines several advantages for use in the food and beverage industry:

Malt Process and QUANTUM's Point of Application

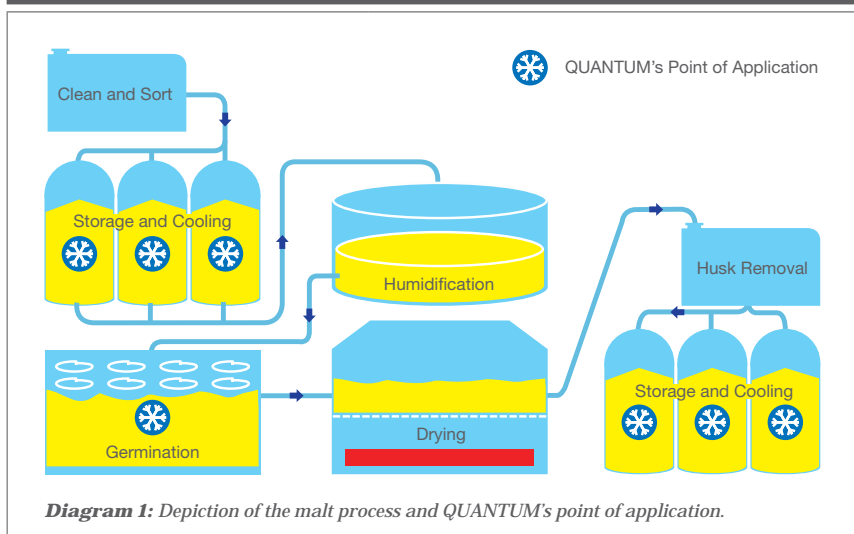


Diagram 1: Depiction of the malt process and QUANTUM's point of application.

COFELY
GDF SVEZ

Start Up Energy Comparison

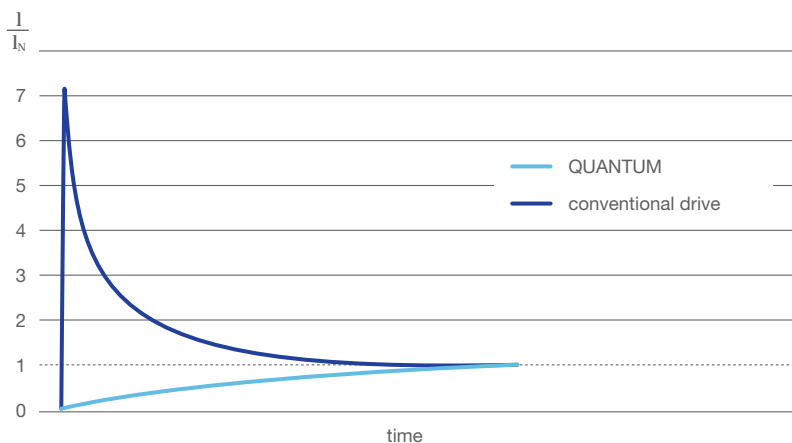


Diagram 2: Comparison of conventional drive and QUANTUM. No electrical peaks occur when QUANTUM starts up.

Oil-free. Through the use of magnetic-bearing turbo compressors, QUANTUM operates completely oil-free. Oil contamination of the grain is impossible. This also implies that the system automatically conforms to the Water Resources Act and other measures against oil leakage.

Multiple compressors ensure process reliability. In order to guarantee Malthouse Weyermann's high quality products, it is very important to maintain constant cooling of the germinating barley. Each compressor in the multiple compressor construction works independently. In the case that one fails, operation continues without disturbance.

Cost-effective. Due to minimum noise and vibration during operation, only a simple designed construction is required. Additional costs for noise re-

duction are not needed. A continuous, steady cold water temperature results in a constant electrical network. Only minimum costs for buffer memory occur.

Low Start Up Energy. The compressor starts up gently and gradually using an extremely small amount of electricity (< 5 A per compressor). The electrical power network remains stable without peaks (see diagram 2).

DELIVERY

On delivery, the compact QUANTUM chilling unit was ready for operation with three turbo compressors and a total capacity of 780kW. It uses the sustainable refrigerant R134a.

Service included installation and implementation of the new system as well as dismantling and disposal of the old system in accordance to regulation.

CUSTOMER SATISFACTION

"Here at Hassfurt, the workers from COFELY REFRIGERATION quickly and competently helped us to implement QUANTUM. The technology could be perfectly integrated into the malting process. Weyermann is very satisfied with QUANTUM and service from COFELY REFRIGERATION."

Roland Schuler
Head of Technical Maintenance Hassfurt
Malthouse Weyermann GmbH & Co. KG

Customer

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