



Ecological refrigeration for apples, pears, etc.: the AMONUM chills foods in a wholly natural manner

Use of modern ammonia chillers in the food industry and agriculture

Customers expect that fresh food is also available out of season – so chilling food directly after harvest is indispensable. Apples, pears, salad, carrots or potatoes can be kept fresh in cold storage for months.

Such cold storage units for fresh foods were often fitted with refrigerator units with direct evaporation systems. Indirect systems with cooling brine are safer and more cost-effective. The AMONUM from ENGIE Refrigeration is ideal for brine applications as it is especially efficient when fully or partially loaded in low evaporating temperatures (up to -15°C).

Along with a cost-effective and reliable operation, food safety and a good ecological balance of the refrigeration system is also important. Thanks to the natural refrigerant ammonia (R-717), the AMONUM is also highly impressive in this respect. No CO_2 equivalent arises from direct emission.

Superior technology for environmentally friendly efficiency

Saltwater applications up to -15°C as well as process cooling and climate control up to $+15^{\circ}\text{C}$ are no problem at all for the AMONUM; heat recovery is also an option for condensing temperatures up to 50°C . The AMONUM operates with a variable speed piston compressor and has a unique evaporator system in which the advantages of dry expansion and flooded evaporation are intelligently interlinked. The SIMATIC S7 control system ensures optimal energy efficiency. All AMONUM chillers are, of course, Smart Grid compatible.



Natural and environmentally friendly cooling using ammonia

The natural refrigerant ammonia (R-717, chemical symbol NH_3) has many benefits: it does not contribute to global warming or cause any damage to the ozone layer. It has an exceptional volumetric cooling capacity as well as a high evaporation heat. Conclusion: Refrigeration with ammonia is efficient and environmentally friendly.

AMONUM chillers are a future-proof technology as whilst the use of halogenated refrigerants is most likely going to be phased out due to environmental protection reasons in the medium-term, there is nothing against the long-term use of the natural refrigerant ammonia.

AMONUM chillers: compact, installed, filled

The AMONUM from ENGIE Refrigeration is the first NH_3 chiller for a power range of 50 to 200 kW and available in four models. AMONUM chillers have an extremely compact design and are delivered from the factory filled up with refrigerant and pre-assembled – they only require connection on site and are ready for use. This means low set up costs and simple installation. And remember: As the AMONUM can be used with less than 10 kg of refrigerant, it can also be used in any machine room provided that it is not accessible to the public.

AMONUM'S benefits

- Sustainable refrigeration with use of the natural and environmentally friendly refrigerant ammonia (NH_3)
- No CO_2 equivalent from direct emission, no contribution to global warming
- High energy efficiency using an innovative evaporator system, intelligent SIMATIC S7 control system and variable speed piston compressor – continuous adaptation to the actual cooling demands
- Smart Grid compatible
- Pre-assembled and compactly designed chiller for simple installation and straightforward setup in every machine room that it is not accessible to the public
- Low refrigerant filling quantity, few detachable connections ensuring minimal leakage and a safe operation
- Four models cover a power range from 50 to 200 kW
- Quality made by ENGIE Refrigeration
- Comprehensive consultation and competent, friendly service on site



ENGIE Refrigeration GmbH
Josephine-Hirner-Strasse 1&3 | D-88131 Lindau
T +49 8382 706-1 | F +49 8382 706-410

refrigeration@de.engie.com
engie-refrigeration.de