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On behalf of the authors,
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Title: KANSREF, Datasystem for natural refrigerants

There is a growing demand for simple tools to design and install cooling systems with natural refrigerants.

Authors have developed such a digital tool for design and construction of mechanical cooling systems, using the most common natural refrigerants like ammonia, carbon dioxide and a group of hydrocarbons. Secondary fluids like ice slurries and formates are included as well. A total of 13 primary and 17 secondary substances are presented. Data for these substances have been gathered from various sources and have been compared.

The target group for the user friendly data system are small and medium size European installation companies. These companies are considered key players in the conversion of HFC-technology to natural refrigerants. They have little access to reliable data and lack resources and expertise to acquire them easily.

The system contains a function library to calculate cooling loads and capacities, environmental parameters like TEWI, safety instructions based on European and other international standards.

Parameters for the transfer of heat, thermophysical properties and Logp-h diagrams are available.

The programme is based on existing data, which are available from various sources. KANSREF is released by the non profit KANS Foundation in the Netherlands. KANS is the Dutch word for CHANCE or OPPORTUNITY It is also the acronym for Knowledge Centre for the Application of Natural Substances in refrigeration and air conditioning.