

Canned motor pumps for industrial cold stores and deep-freeze centres

As globalisation continues, the world-wide demand for deep-freeze centres and industrial cold stores increases. Especially food but also pharmaceuticals must be stored temporarily. The requirements range from deep-freezing with temperatures of approx. -25°C to fresh food storage with temperatures of up to approx. $+15^{\circ}\text{C}$. In addition to raw products like meat or fish, finished products such as ice cream, baked goods, sweets or flowers are also stored refrigerated. As the cooling of food and pharmaceuticals is subject to strict guidelines and increased safety requirements, hermetic systems are often used in large installations to circulate the coolant.

Your benefits

- Protection: Absolute leak-tightness of the system even when using coolants with high requirements such as ammonia or CO_2
- Efficiency: Lowest life cycle costs thanks to low maintenance costs
- Safety: Emergency storage for standard portfolio in the case of a pump failure

Typical areas of application

- Industrial cold stores
- Deep-freeze centres



Sealless Technology **Unlimited**

APPLICATION REPORT

Deep-freeze centre in Northern Germany

Requirements

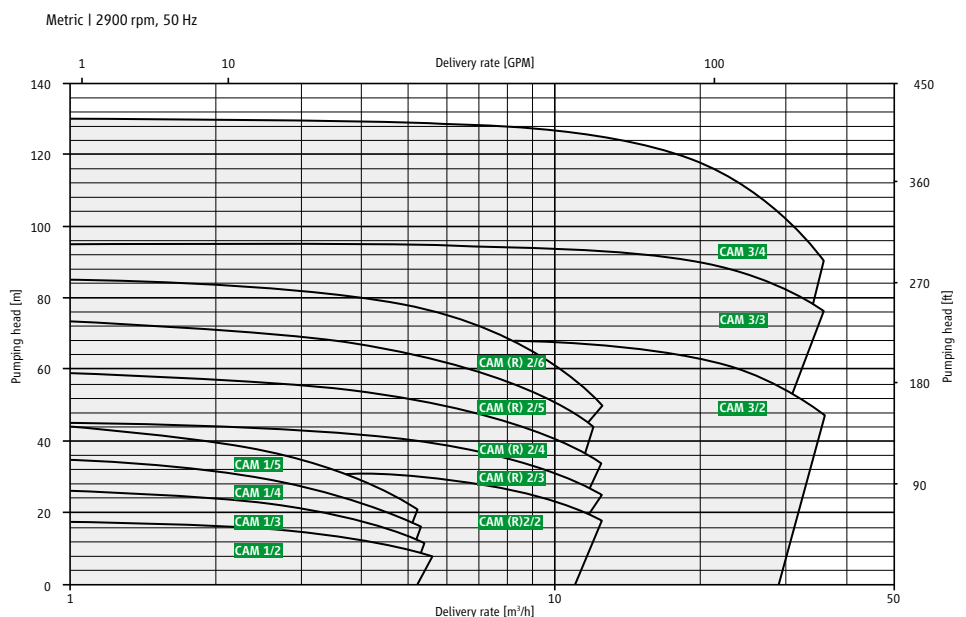
In this deep-freeze centre in Northern Germany, which focus on food storage, an ammonia cascade system with two cooling circuits is used. The system feeds 25 cooling chambers, two shock freezers and a defrosting room. The two cooling circuits used have operating temperatures of -40°C and -10°C . Ammonia is used as a heat transfer medium in both circuits. When selecting the system components, leak-free operation, long and therefore few maintenance cycles and fast response and problem-solving times in the case of a pump failure were decisive.

The pump used

Three identical HERMETIC canned motor pumps CAM 2/3 with AGX3.0 motor are used in the system. These are 3-stage canned motor pumps. While two pumps are installed in parallel operation, the third pump serves as an emergency pump in the case of a pump failure. The multi-stage CAM series is characterised particularly by high pumping heads and can include up to 6 stages as standard. With the help of a frequency converter, the operating points could be ideally adapted to the utilisation of the various cooling chambers.

Decisive factors for the plant manufacturer to choose these HERMETIC pumps were especially the high safety against media leakage, the long maintenance-free service life and the fast emergency supply in case of a pump failure.

Further information on the HERMETIC CAM series is available [here](#).



Medium / refrigerant

Ammonia is the primary and most widely used refrigerant worldwide. It is mainly used in large installations such as deep-freeze stores, abattoirs, breweries, central refrigeration in the chemical industry and ice rinks. Cascade systems where CO₂ and ammonia are used in parallel are becoming increasingly popular. The advantages of ammonia are its large specific enthalpy of vaporisation, its environmentally friendly properties and many years of experience as a refrigerant.

We have the right pumps for your industry



CAM(R)

CNF

CAMh

Delivery rate:	max. 40 m ³ /h	max. 80 m ³ /h	max. 14 m ³ /h
Pumping head:	max. 180 m	max. 70 m	max. 120 m
Pressure rating:	PN25 and PN40	PN25 and PN40	PN52
Operating temperature:	-50 °C to +30 °C	-50 °C to +30 °C	-50 °C to +5 °C
Speed:	2800 to 3500 rpm	2800 to 3500 rpm	2800 to 3500 rpm
Viscosity:	max. 20 mm ² /s	max. 20 mm ² /s	max. 20 mm ² /s

[Learn more](#)

[Learn more](#)

[Learn more](#)

Customisations

If you cannot find a suitable pump series? We are happy to help you with a customised solution regardless of the quantity. Please contact us.

[Contact now](#)



HERMETIC-Pumpen GmbH
79194 Gundelfingen, Germany
www.hermetic-pumpen.com
cool-support@hermetic-pumpen.com