

Ammonia – The Natural Refrigerant

No 1 in sealless pump technology for refrigeration applications

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HERMETIC-Pumpen GmbH
Refrigeration Systems with canned motor pumps at Arcon 2025

Association of AMMONIA REFRIGERATION **ARC-ON**
Sustainable, Efficient and Innovative Energy Refrigeration Systems

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AGENDA

01	Hermetic Introduction	3'
02	Basic Technology & Application	5'
03	Summary	2'

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ARC-ON

HERMETIC Summary

HERMETIC-pumps-group:

- Family-owned pumps manufacturer since 1866: Experiences in pumps production for more than 150 years, and in hermetically sealed drives for more than 50 years.
- more than **360.000** pumps delivered worldwide
- 780 employees worldwide (405 in Europe, 305 in China, 15 in South-East-Asia, 10 in USA)
- leakage-free drive systems of centrifugal pumps with canned motors and magnetic drive used for difficult pumping problems in chemical, petrochemical, nuclear power and refrigeration industries

Range of Applications:

- system pressures up to 1200 bar
- fluid temperatures from -160 °C up to +480 °C
- shaft powers from 1kW to 690 kW

→ Nearly all delivery problems can be solved with HERMETIC pumps.

First Canned motor pump 1956


Diesel Desulphurization 400°C

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HERMETIC

Hermetic Germany

1967



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HERMETIC

Internationalization South East Asia

- 2014 Foundation of HERMETIC-Pumps Singapore Pte. Ltd.
- 2016 Expansion to Malaysia
- 2017 Expansion to Thailand
- 2018 Expansion to India
- 2023 Foundation of HERMETIC Pumps Malaysia as a subsidiary of HERMETIC Singapore

HERMETIC-Pumps Singapore Pte. Ltd.
City Bizhub
8th, 65 Ubi Road 1 #03-82
Singapore 408729
phone +65 6702 2138
www.hermetic-pumps.sg

- center of competence for South-East-Asia
- spare parts
- standard pumps in stock
- delivery in ASEAN within 24h



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HERMETIC

HERMETIC – challenge to knowledge

ADVANCED TECHNOLOGY

1866–2016
150 years of experience
150 years of knowledge
150 years of passion for innovation

1866: hand driven wine pump

1910: rotary lobe pump

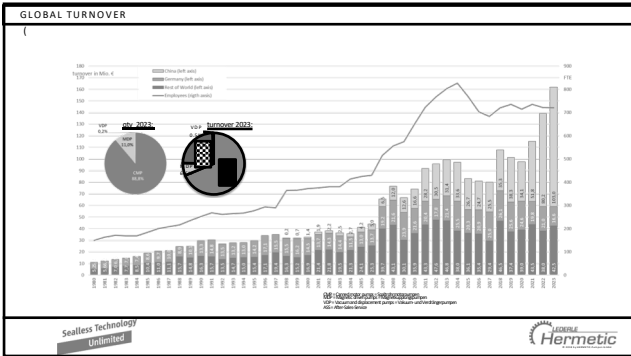
1955: First canned motor pump

2012: Desulphurisation pump

2021: Supercritical pump

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HERMETIC



BUSINESS FIELDS IN INDIA

- Refrigeration Industry**
 - Refrigeration plant, Cold storages, seafood processing etc
- Chemical industry**
 - Bulk chemicals, commodities, fine chemicals, petrochemicals
- Oil & Gas industry**
 - Refineries, Gas-terminals,
- Others...**
 - ISRO, rocket fuel
 - Supercritical CO2 extraction processes

ISRO satellite launch: Proud moment for India, 104 satellites placed in orbit

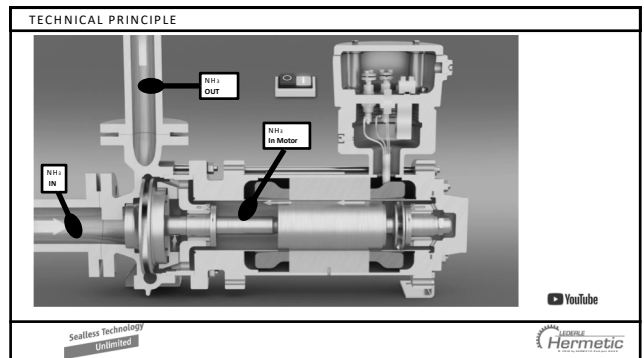
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TECHNOLOGY EFFECTS

<p>Pump: CAMTV 52 / 6x6</p> <p>Motor: N90-2 2c</p> <p>Power: 670 kW</p> <p>Liquid: Liquefied Ethylene</p> <p>Temp.: -65 - 95 °C</p> <p>Flow (max): 140 m³/h</p> <p>Head (max): 2300 m</p> <p>Length: app. 4300 mm</p> <p>Weight: app. 6000 kg</p>	<p>High level customized product</p> <p>Knowledge & Experience</p> <p>standardized refrigeration application</p>	<p>Pump: CAM 2/3</p> <p>Motor: AGX 3.0</p> <p>Power: 3 kW</p> <p>Liquid: Amônia NH3</p> <p>Temp.: -40°C</p> <p>Flow: 8 m³/h</p> <p>Head (max): 30 m</p> <p>Weight: app. 60kg</p>
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HERMETIC

REFRIGERATION PUMP

Refrigeration pump:

- „downgraded“ canned motor pump
- design based on chemical / petrochemical pump
- Standardized
- Short delivery time
- No explosion proof

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HERMETIC

REFRIGERATION PUMPS MARKETS AND PRODUCTS

HERMETIC pumps in the refrigeration industry – Areas of application

Single-stage canned motor pump type CMF

Multi-stage canned motor pump type CAM

Single-stage canned motor pump type LC

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SOFTWARE ASSISTED SELECTION OF PUMP TYPE

Local Product specialist
Shawn Wismath
Senior Sales Manager for Hermetic Pumps Singapore Pte Ltd

Modern pump selection software
Input:
• Flow & head
• Liquid & temperature
• Refrigeration capacity

Software calculation
Output:
• Data sheets
• GA drawing
• Sectional drawing

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STANDARDIZED HIGH QUALITY PRODUCTION

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AMMONIA PLANT

Expansion and refurbishment of a pasta production facility

5 canned motor pumps of the type CAM 2/3
Flow rate 12.3 m³/h for the 35°C circuit

5 plastic canned motor pumps type CAM 2/3
Flow rate 11.5 m³/h for the circuit -25°C

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MARINE APPLICATION

Picture: Cooling system for modern 1800m³ tuna fishing vessel

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Winter Olympic Games 2022

STAL Gram YORK

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		ARC ON

EXTENDED WARRANTY ON ALL PUMPS FROM 24 TO 30 MONTHS

Warranty for all new pumps:

30 months after delivery





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- Summary**
- Experience over 360000 canned motor pump
 - Yearly about 5000 pumps for refrigeration applications
 - Over 50 years of experience in the field of pumps and ammonia
 - Standardized high quality safe and reliable solution.
 - Warranty of 30 months
 - For circulation of refrigerants, our hermetic centrifugal pumps are used worldwide because of their leakage and maintenance reliability.
 - They are characterized by compactness, ease of installation and above all by lower life cycle costs and high reliability.
 - Low TCO – total cost of ownership / global spare part demand at our refrigeration pumps < 3%
- Sealless Technology
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