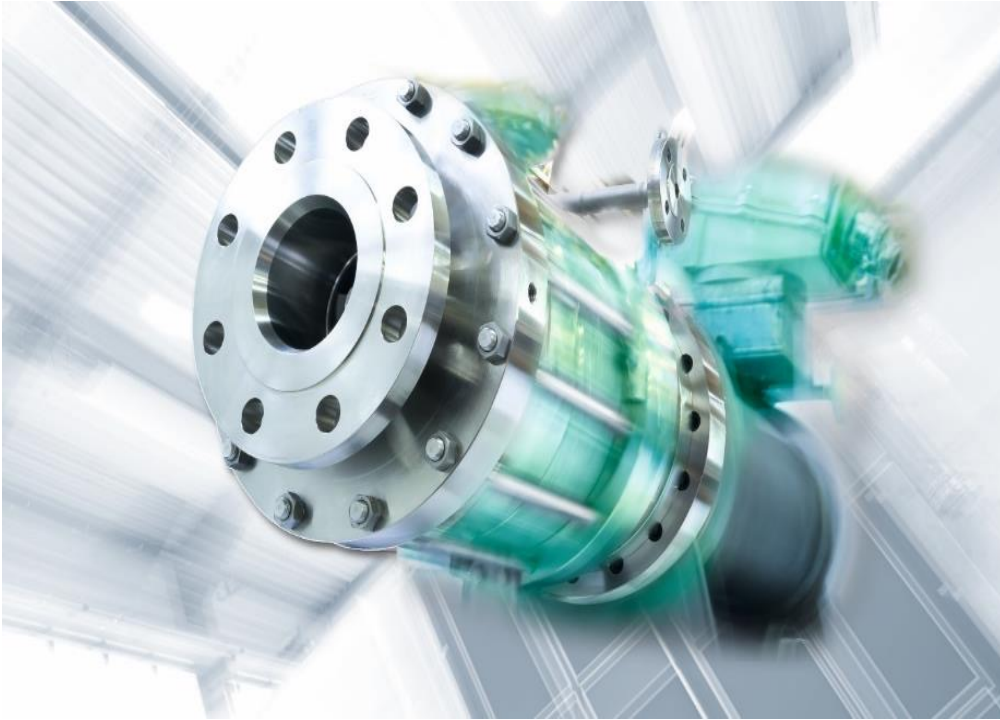




LEDERLE

Hermetic

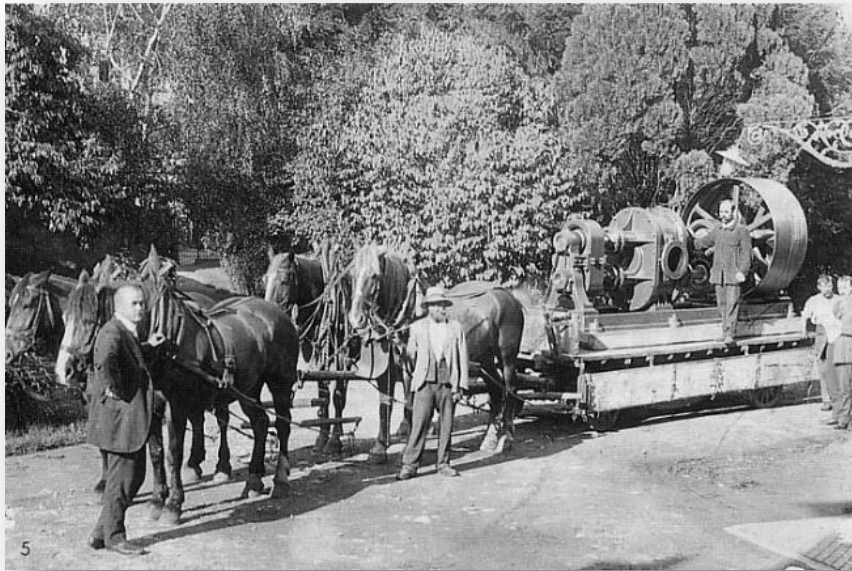


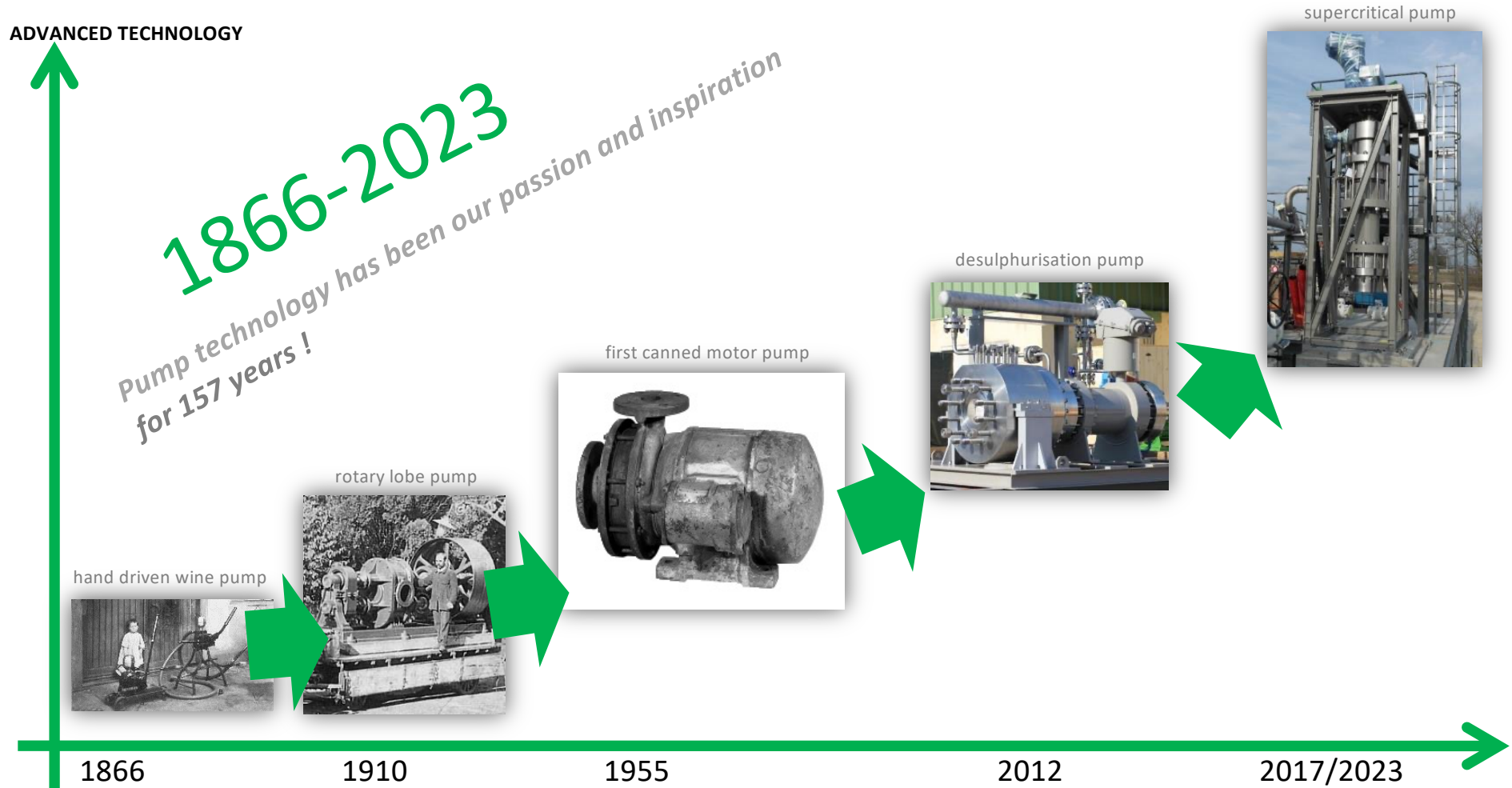
HERMETIC-Pumpen GmbH

Commercial Introduction – ARCON 2024

1866-2023

*Pump technology has been our passion and inspiration
for 157 years !*





HERMETIC Pumps:

- Family-owned pumps manufacturer since 1866:
Experiences in pumps production for more than 157 years,
and in hermetically sealed drives for more than 65 years.
- More than **345,000** pumps delivered worldwide
- 735 employees worldwide (380 in Europe, 330 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



Supercritical Ethylene 2017, 2023



Diesel Desulphuration 406°C, 2015





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.

Oxley Bizhub
Blk 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



HERMETIC-Pumpen GmbH

Gewerbestraße 51
79194 Gundelfingen
Germany

+49 761 5830-0

hermetic@hermetic-pumpen.com

www.hermetic-pumpen.com

VAT number: DE 142212033

Establishment year: 1956

Sealless Technology **Unlimited**

Board / managing directors and executives

Managing Director of Operations	Nicolaus Krämer
---------------------------------	-----------------

Managing Director of Finance and Sales	Sebastian Dahlke
--	------------------

Management HERMETIC Germany

Director of Sales	Achim Surber
-------------------	--------------

Director of Technical Office	Christoph Wittmann
------------------------------	--------------------

Director of Technology and Development	Christian Dahlke
--	------------------

Figures HERMETIC-Group Worldwide

Share capital:	12,000 T€		
----------------	-----------	--	--

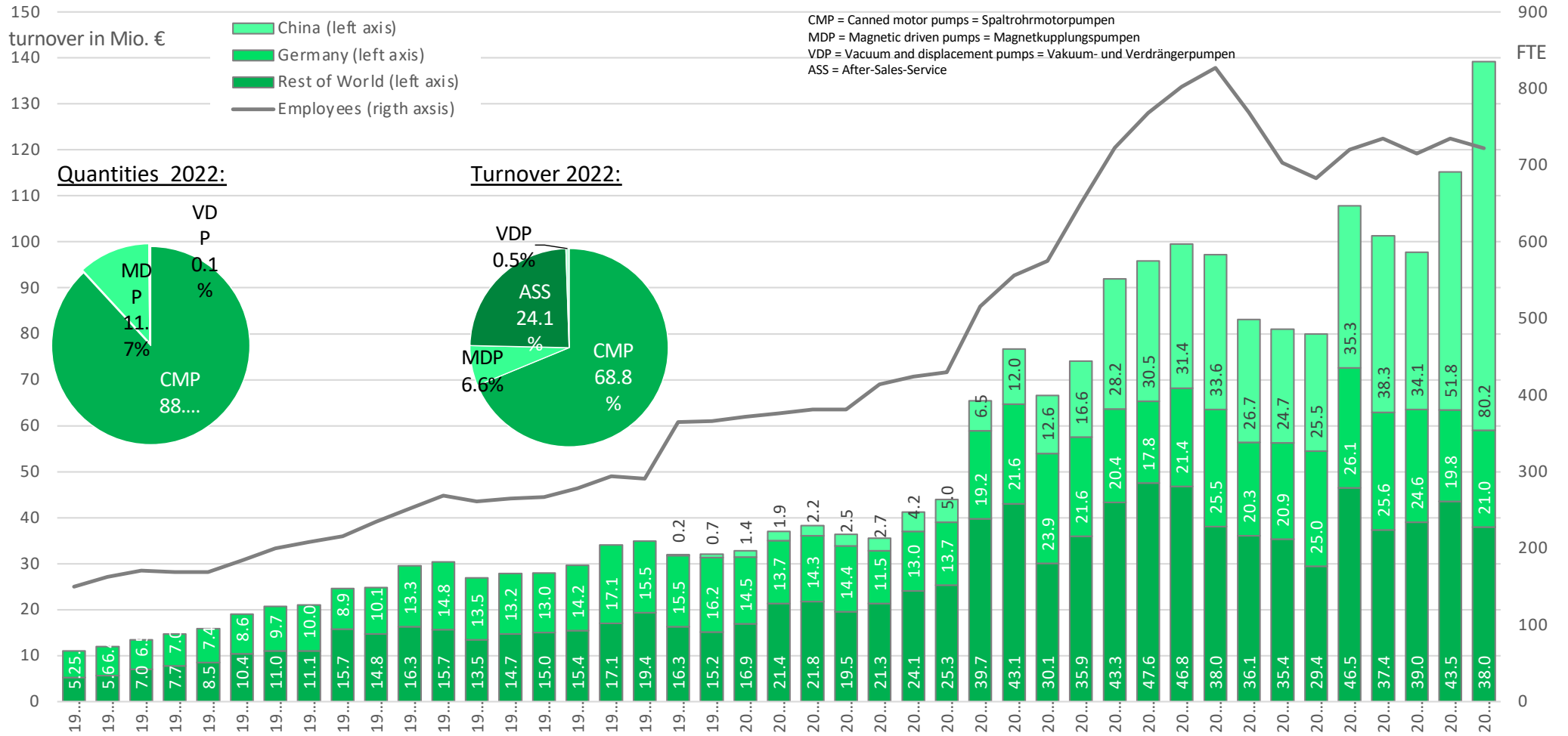
Equity:	119.668 T€ (2022)	110.735 T€ (2021)	98.098 T€ (2020)
---------	-------------------	-------------------	------------------

Turnover:	146.959 T€ (2022)	120.741 T€ (2021)	99.513 T€ (2020)
-----------	-------------------	-------------------	------------------

EBIT:	18.928 T€ (2022)	12.764 T€ (2021)	7.525 T€ (2020)
-------	------------------	------------------	-----------------

Sealless Technology **Unlimited**







We master **your refrigerant.**

Applications



Ice Sport

Freeze Drying

Data Center

Marine

Cold Storage

Industrial Refrigeration

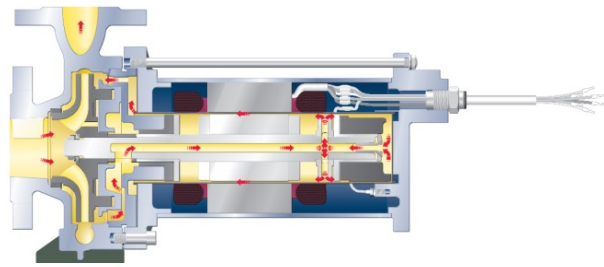
Supermarkt

Brewery

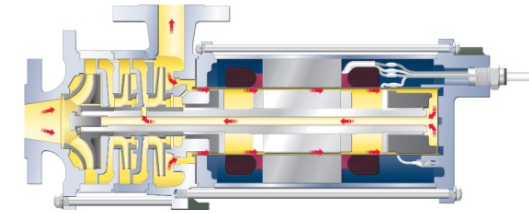
Railway

HERMETIC REFRIGERATION PUMP TYPES

RANGE OF PRODUCTION / OVERVIEW



Diagrammtitel



HERMETIC
Canned motor pump
Refrigeration Industry

Single Stage
Dim. + performance
acc. to ISO 2858
Type CNF

Multi Stage
TYPE CAM

liquified gas
Return of partial flow
to discharge side
(auxillary impeller)

Dim. + performance
acc.
ISO 2858

Motor power
3 - 12 kW

liquified gas
Return of partial flow
between stages

CAM 2

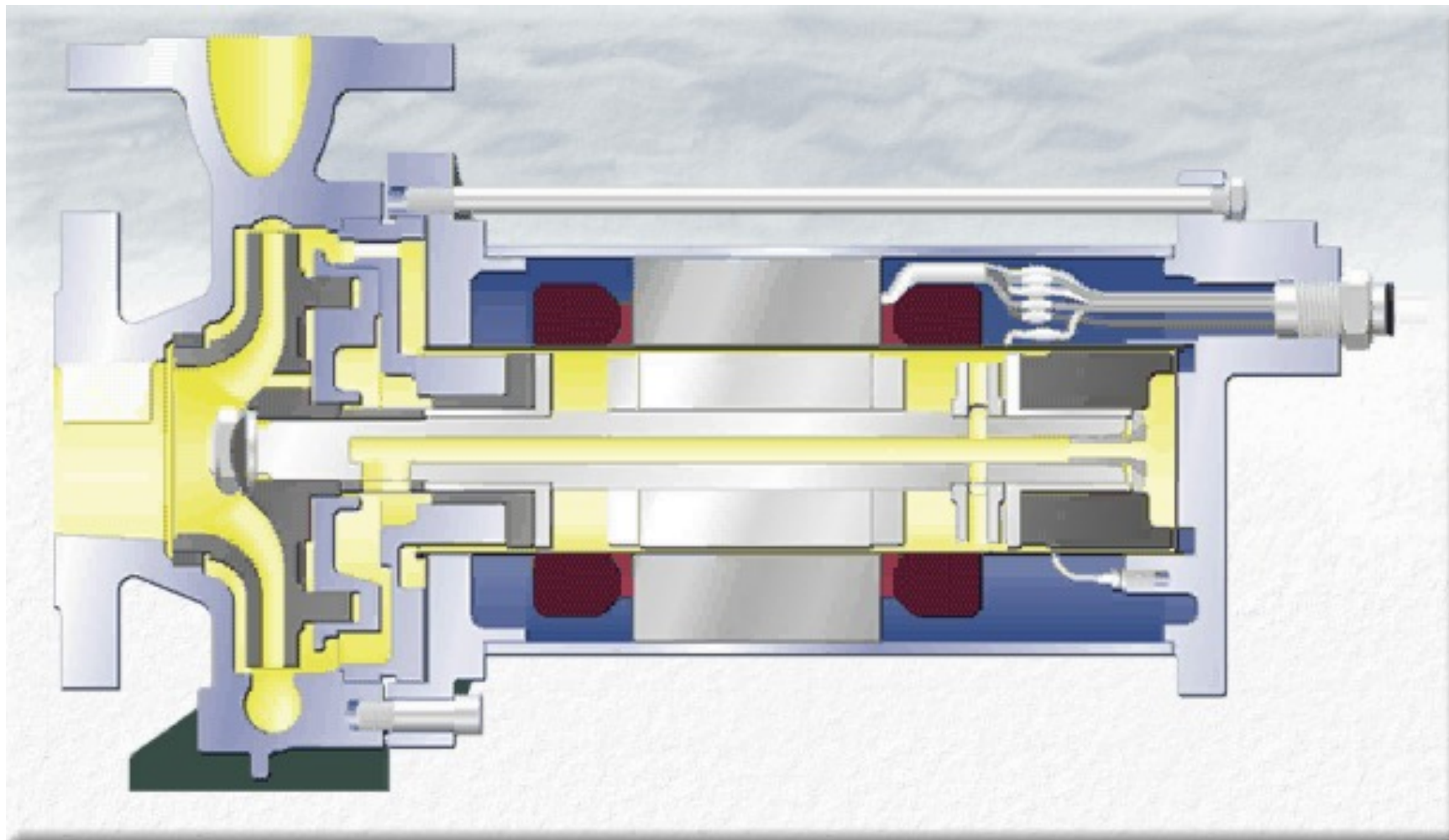
Motor power
1 - 19kW

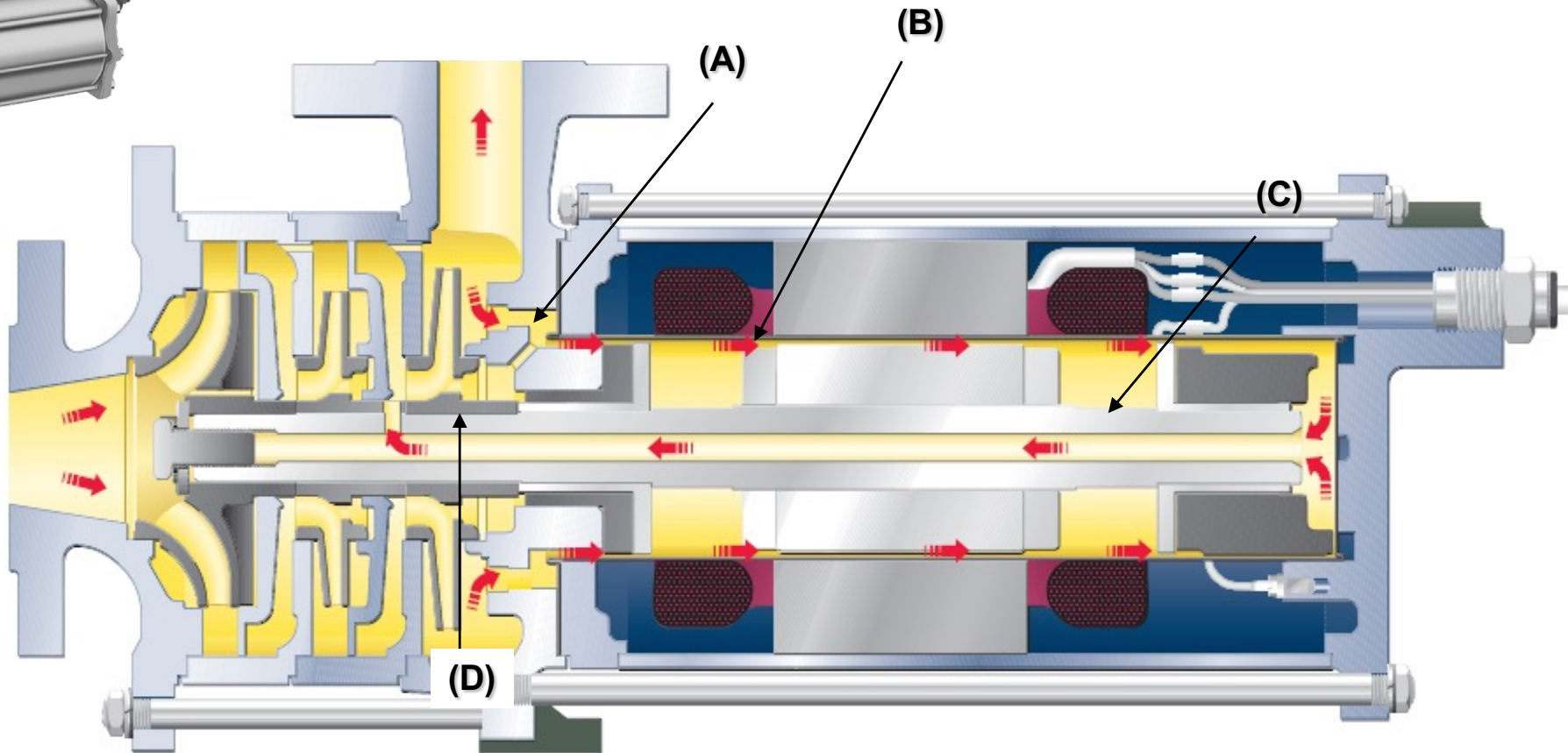
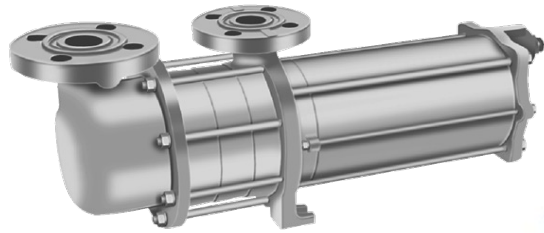
Flow: 10-50m³/h
Head: max. 56m
(50Hz)

CAM 2...
vertical
suction nozzle

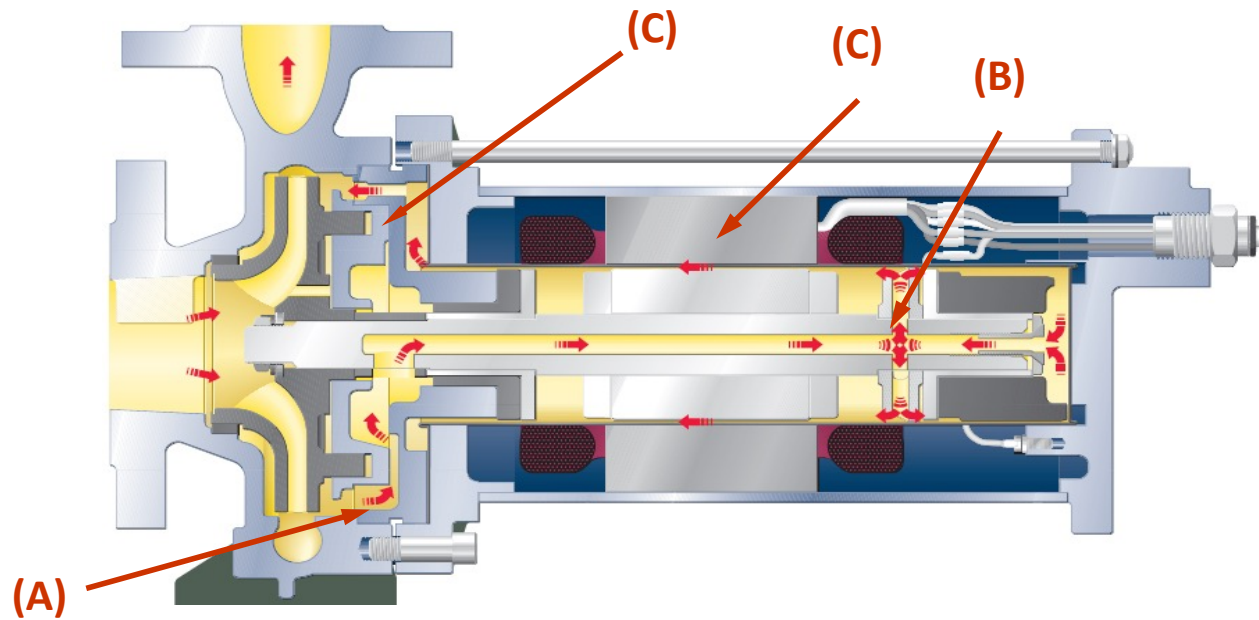
CAMR 2
horizontal
suction nozzle

Flow: 1-35m³/h
head: max 130m
(50Hz)





Type CAM:
partial flow is divided at high pressure level from the last impeller (A) through the motor (B) and flows back (C) to a lower pressure level between the stages (D)

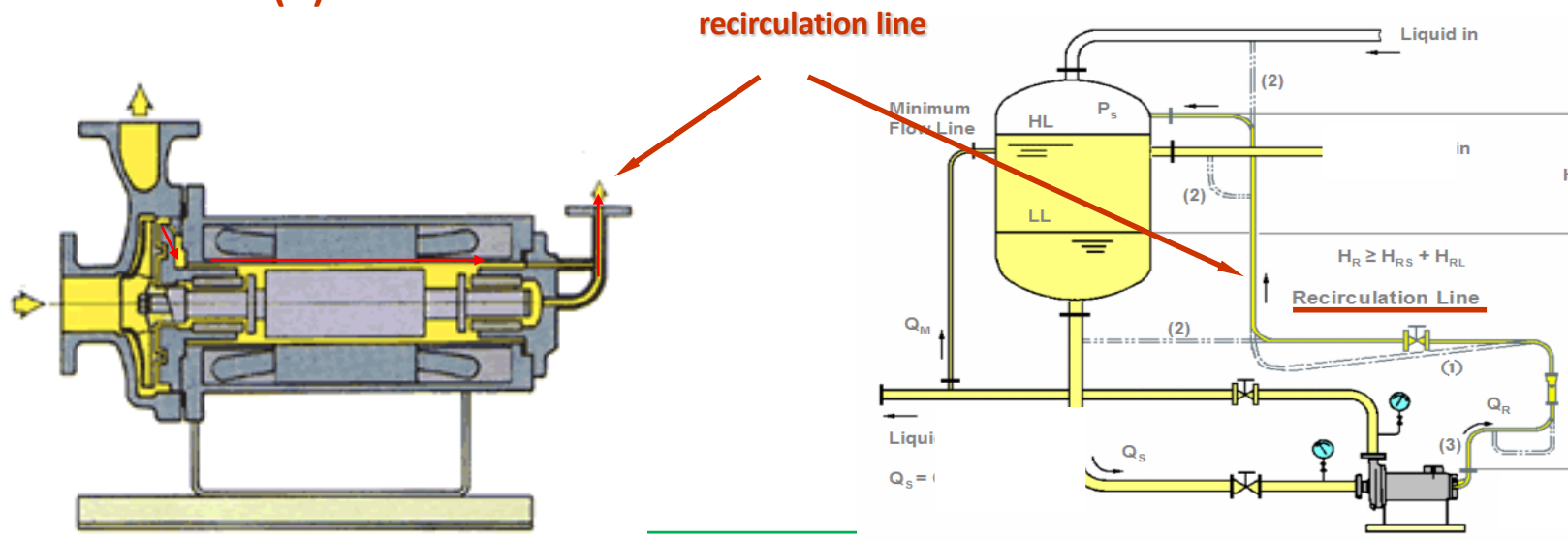


DESCRIPTION of CNE:

- (A)** partial flow is deviated with at higher pressure into the motor
- (B)** Pressurised with an auxiliary impeller
- (C)** carried back to the DISCHARGE side of the pump (C).

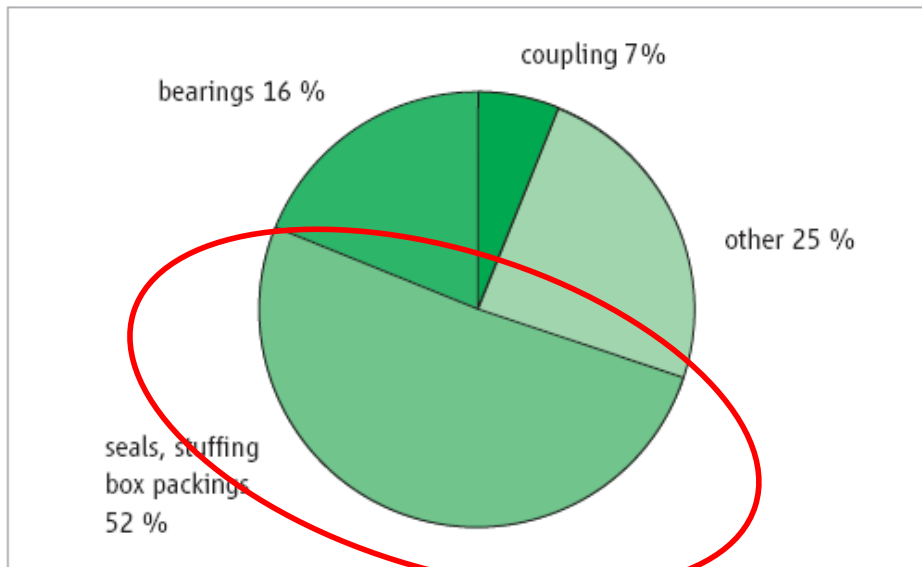
=> Internal integrated partial flow

=> competitors uses often **EXTERNAL PIPING (recirculation line)**, back to suction vessel for partial flow



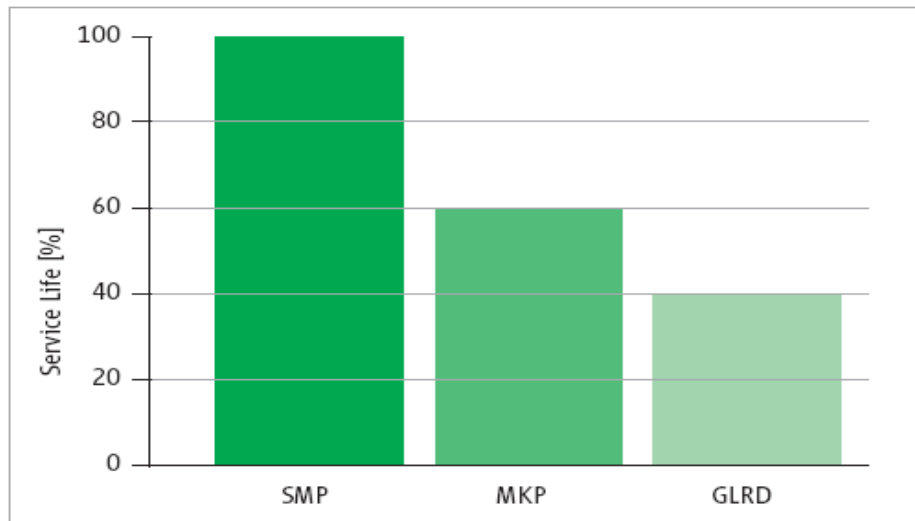


BENEFITS



Reliability

- conventional centrifugal pumps the seals at 52 % play a dominant role in the cause of failure.
- Damage caused by roller bearings and couplings is considerably lower.



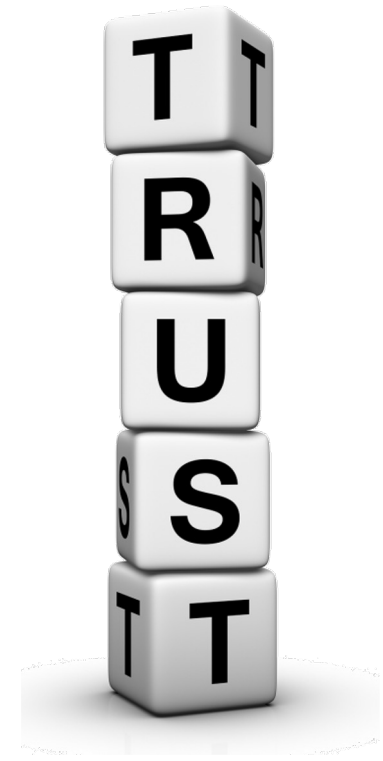
- Service life of canned motor
- CMP has considerable advantages over magnetically coupled pumps (60 %) and convent. pumps (40 %).

Figure 5: Service lives of various types of centrifugal pumps

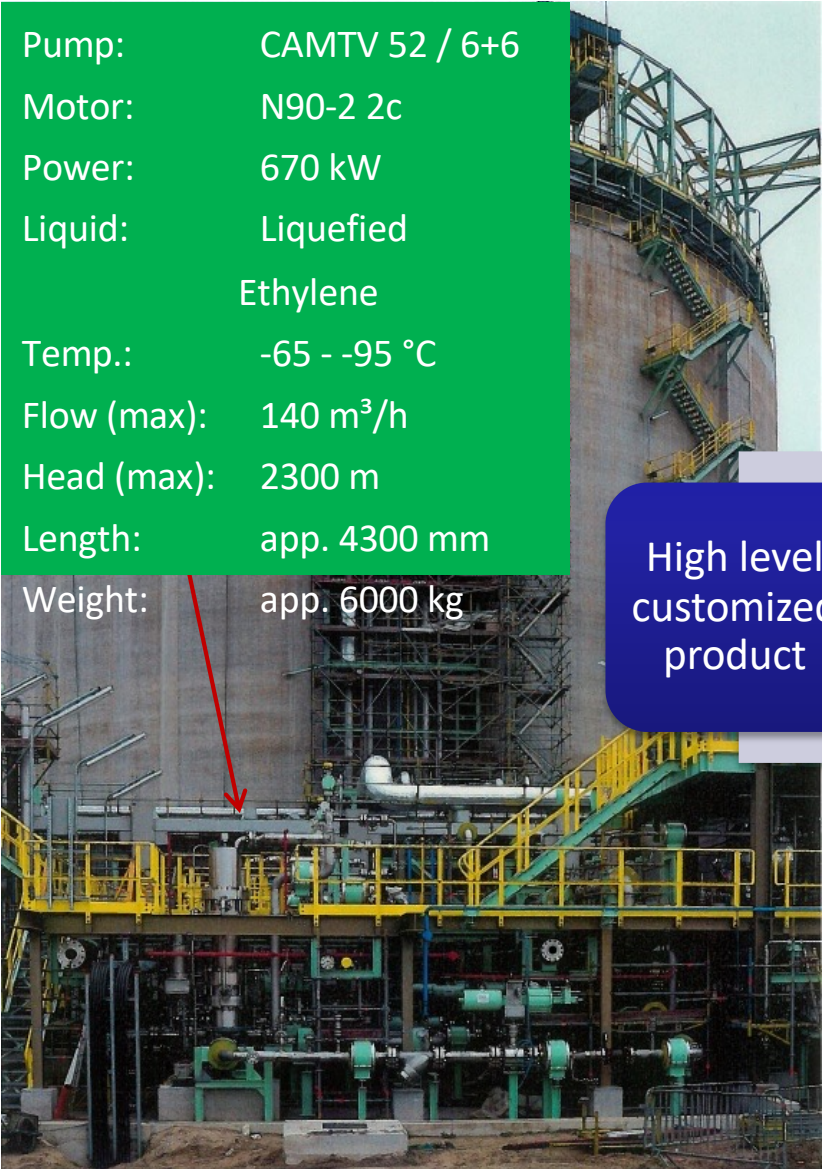
SMP canned motor pump
 MKP magnetically coupled pump
 GLRD mechanical seal pump

EXTENDED WARRANTY ON ALL PUMPS FROM 24 TO 30 MONTHS

- extended warranty for all new pumps ordered from July 1st, 2015 on **30 months after delivery**
- warranty for spare parts, merchandise and other products and services is 12 months after delivery



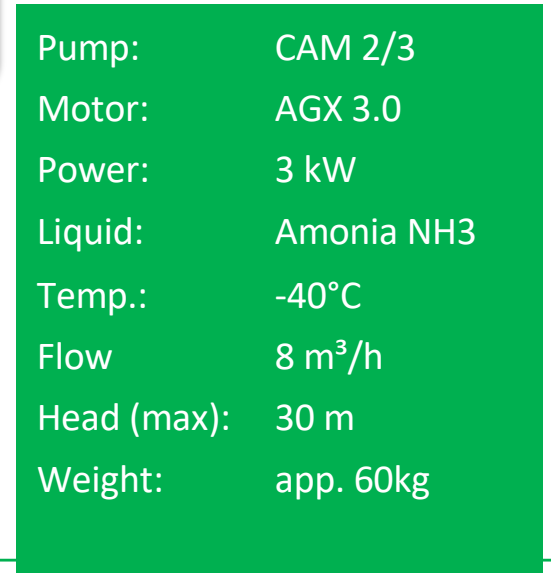
TECHNOLOGY EFFECTS



High level customized product

Knowledge & Experience

standardized refrigeration application



PUMP SELECTION AND THERMIC CALCULATION SOFTWARE

<http://www.hermetic-pumpen.com/en/>



The screenshot shows the Hermetic website interface. At the top, there is a navigation bar with the following items: CHEMICAL, OIL & GAS, REFRIGERATION (highlighted in green), POWER GENERATION, Products, Service, Jobs & Career, and Contact. Below this, there are three main content blocks: 'CHEMICAL' (HERMETIC pumps in the chemical industry), 'REFRIGERATION' (HERMETIC pumps in the refrigeration industry), and 'POWER GENERATION' (HERMETIC pumps in solar thermal applications). A dropdown menu is open under 'REFRIGERATION', listing: Pump selection (highlighted in green), Operating manual, Pump types, Installation note, Frequenzregelung, Publications, Newsletter, and Gallery. A 'News' section is also visible, featuring a quote: "Russian oil and gas industries' best centrifugal-pump manufacturer for 2013".

Refrigeration

Pump Selection



CONCEPT FOR STANDARDISATION, STOCK & DELIVERY



Most common pump types:

- multi stage CAM types
- single stage CNF types
- high controlled quality level in standardized production
- reduced delivery time: 2 weeks instead 6-10 Weeks
- emergency delivery: from stock

Standard refrigerant pumps
Type CAM 1, CAM 2, CAMR 2 and CNF

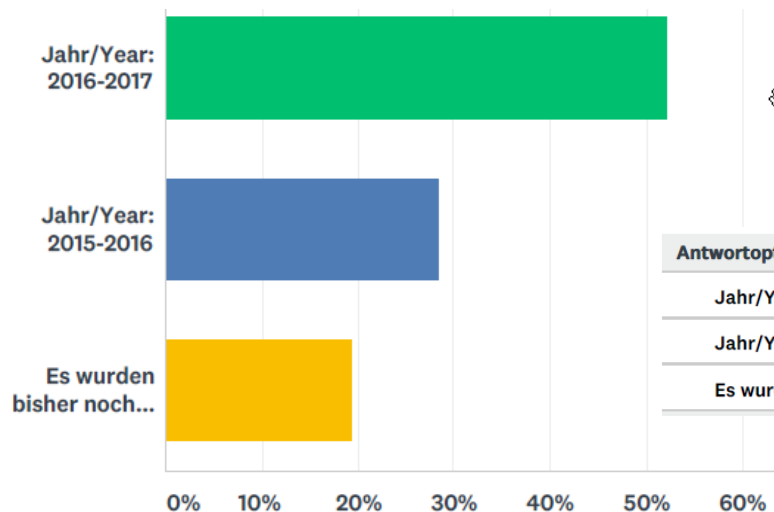
Material No.	Type of Pump	Type of Motor	Material	Voltage	Connection Cable	Inducer	Design Pressure	Impeller Diameter
			nodular cast iron JS1025	400V ★	2,5 m		PN40	max.
K0011B	CAM 1/3	AGX1.0	•	•	•	•	•	•
K0012B	CAM 1/4	AGX1.0	•	•	•	•	•	•
K0033B	CAM 2/2	AGX3.0	•	•	•	•	•	•
K0034B	CAM 2/3	AGX3.0	•	•	•	•	•	•
K0056B	CAM 2/3	AGX4.5	•	•	•	•	•	•
K0035B	CAM 2/4	AGX3.0	•	•	•	•	•	•
K0057B	CAM 2/4	AGX4.5	•	•	•	•	•	•
K0036B	CAM 2/5	AGX3.0	•	•	•	•	•	•
K0091B	CAMR 2/2	AGX3.0	•	•	•	•	•	•
K0092B	CAMR 2/3	AGX3.0	•	•	•	•	•	•
K0093B	CAMR 2/4	AGX3.0	•	•	•	•	•	•
K0094B	CAMR 2/5	AGX3.0	•	•	•	•	•	•
K0209B	CNF 40-160	AGX3.0	•	•	•	•	•	•
K0214B	CNF 40-160	AGX4.5	•	•	•	•	•	•
K0245B	CNF 40-200	AGX4.5	•	•	•	•	•	•
K0256B	CNF 40-200	AGX6.5	•	•	•	•	•	•
K0329B	CNF 50-200	AGX6.5	•	•	•	•	•	•
K0340B	CNF 50-200	AGX8.5	•	•	•	•	•	•
K0210B	CNF 40-160	AGX4.5	•	•	•	•	•	•
K0215B	CNF 40-160	AGX6.5	•	•	•	•	•	•
K0228B	CNF 40-160	AGX8.5	•	•	•	•	•	•
K0246B	CNF 40-160	AGX6.5	•	•	•	•	•	•
K0257B	CNF 40-160	AGX6.5	•	•	•	•	•	•

Fast Availability



SURVEY REFRIGERATION PUMPS

When you have ordered last time Hermetic canned motor pumps ?



Antwortoptionen	Beantwortungen
Jahr/Year: 2016-2017	52,07%
Jahr/Year: 2015-2016	28,40%
Es wurden bisher noch keine Pumpen gekauft No pumps have been purchased yet	19,53%

Would you recommend Hermetic Refrigeration pumps again ?



Antwortoptionen	Beantwortungen
Ja / Yes	99,19%
Nein / No	0,81%

SERVICE AND TECHNICAL ASSISTANCE

HERMETIC –
No 1 in sealless pumps
technology for refrigeration
applications

Engineered in Germany –
Made in Germany

We are experts in
canned motor pumps
technology – for
more than **60 years**

Pumps for **your** application:
We have it – or engineer it

Available **24/7**

Safety in your process
is our priority!


430 outstanding employees
are on duty

Over **280,000** HERMETIC pumps
have been installed worldwide






CERTIFICATE



This is to certify that



HERMETIC-Pumpen GmbH
 Gewerbestraße 51
 79194 Gundelfingen
 Germany


has implemented and maintains a **Quality Management System**.

Scope:
 Developing and manufacturing processes, sales activities, repair and service of hermetically sealed centrifugal pumps with canned motors or magnetic drive, positive-displacement pumps, vacuum pumps, compressors, complete systems and stirring devices with conventional or hermetic seal, as well as conventional centrifugal pumps.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2015

Certificate registration no.	522973 QM15
Valid from	2021-08-08
Valid until	2024-08-07
Date of certification	2021-08-16




DQS GmbH



Markus Bleher
 Managing Director

Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany



■ **ISO 9001** since 1997



■ **ISO 14001** since 2012



■ “Systematic Safety” seal of approval **NLF / ILO-OSH seit 2001**



■ **AD 2000-HP 0 / DIN EN ISO 3834-2 (2014/68/EU)**



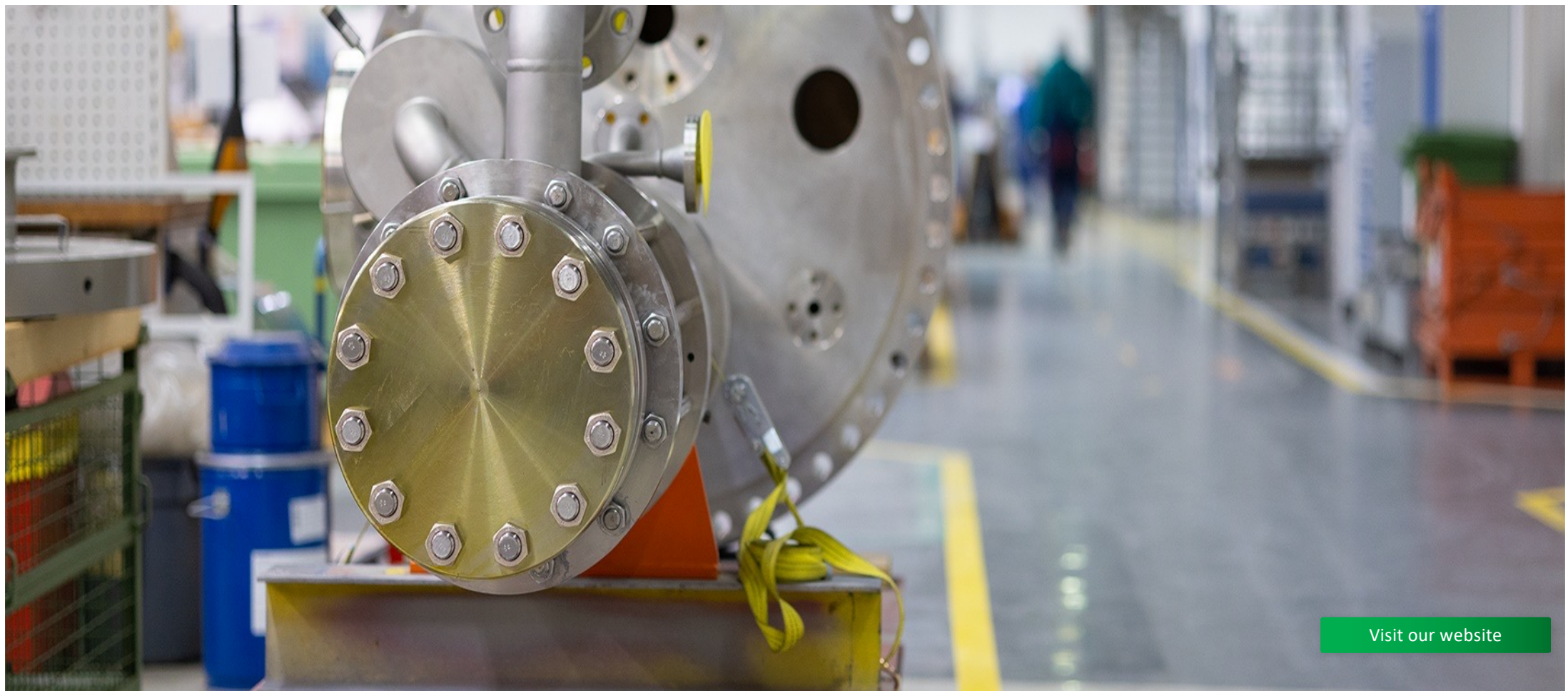
■ **KTA 1401 and AVS D 100/ 50**



■ **BS OHSAS 18001** in China



■ **ISO/TS 22163** for locomotive pumps in China



Thank you