

V-LINE EXPERT TOOL

Just a few clicks separate you from your matching canned motor pump

WORLD MARKET LEADER

We are a global leader in the segment of hermetic centrifugal pumps

HERMETIC E-LINE

High pressure for diesel desulphurisation

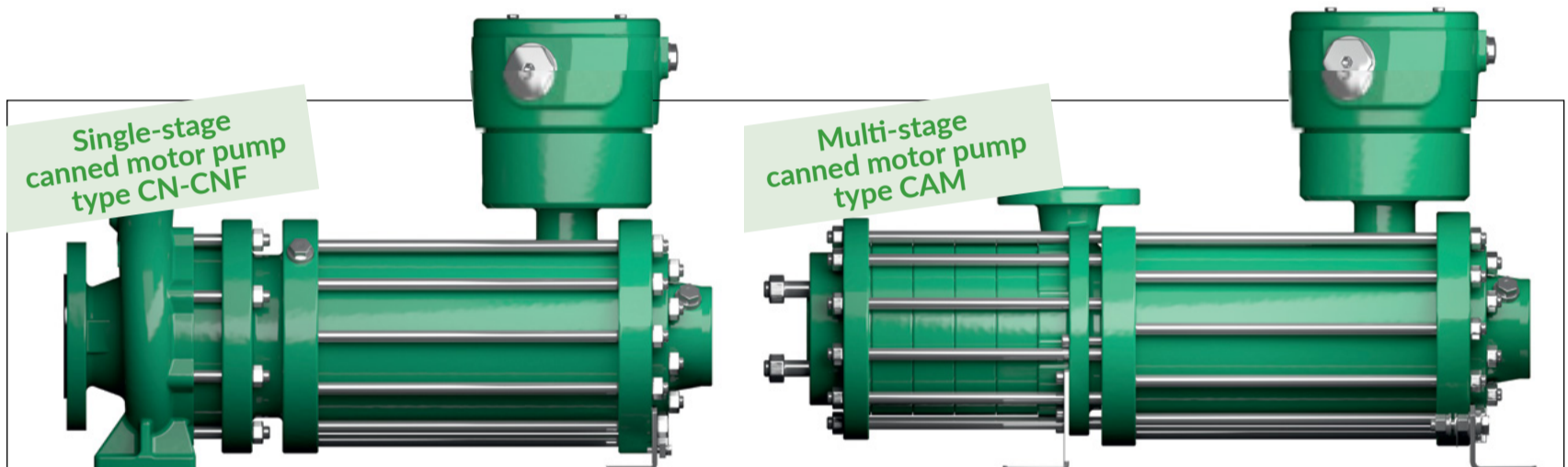
The New HERMETIC V-Line

Canned motor pumps with modular configuration for chemical and petrochemical industries

We consistently aligned our offer of canned motor pumps with market requirements in the new configuration of our pump range. The "V-Line" product range bundles single- and multi-stage canned motor pumps for common requirements in the chemical

and petrochemical industries. This way, we offer modular configurable pump variants with optimised delivery times of 8 to 12 weeks for a wide application range. Without exception, all pumps meet the high HERMETIC quality standards, including those

of the unique ZART® (Zero Axial and Radial Thrust) principle. An innovative expert tool allows configuration with just a few clicks.



Operating data of the V-Line

Pump capacity [Q]: 1.0 to 130 m³/h
Pumping height [H]: 12 to 295 m
Output power [P2]: 8 to 48 kW
Conveyed material temperature [t]: -40°C to +120°C
Operating pressure: up to 40 bar

The V-Line expert tool

Our online tool lets you configure many pump-motor combinations with just a few clicks

► vline.hermetic-tools.de

Overview of the HERMETIC V-Line

The HERMETIC V-Line is designed for fast, need- and price-optimised delivery of canned motor pumps for common applications in the chemical and petrochemical industries. There is a choice of many different variants with different hydraulics, motor ratings and material versions including matching monitoring technology.

Attractive prices and quick delivery

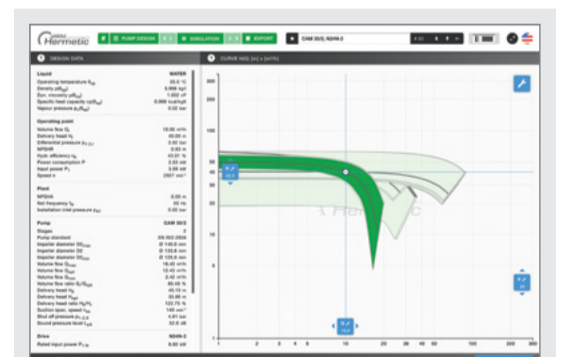
In full alignment with the modular approach of plant construction, the V-Line with its standardised assemblies and adjusted production and logistics processes allows you to profit of very short delivery periods. You will receive your V-Line pump in only 8- 12 weeks after your order – at a good price. This makes our sophisticated canned motor pump technology, previously used primarily in customised high-end solutions, technically and economically attractive for many other fields of application as well.

100% HERMETIC quality

Like all canned motor pumps from HERMETIC, the V-Line offers the same highly developed HERMETIC technologies including the unique ZART® (Zero Axial and Radial Thrust) principle. Without exception, our pumps meet the high HERMETIC quality standards. The modular pump design ensures high spare parts availability.

The expert tool for simple online configuration

Configure and select the matching canned motor pump with our dedicated HERMETIC (V-Line) expert tool. The innovative browser-based software shows you with just a few clicks which pump is the right one for you. Based on the operating point and pumping media data, the expert tool also enables a real-time simulation of the pump design and thus optimisation of the design parameters. Try it out right away: vline.hermetic-tools.de



Are you interested in the V-Line or do you have any questions about our expert tool?

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*System requirements: Google Chrome 68+ or newer / Firefox 6.0 / Edge 17 / Safari 11, resolution at least 1280x800



From a one-man operation to world market leader

HERMETIC is among the 2018 Global Market Leader Champions

We are known around the world for our safe and long-lasting pumps which can be used for the most extreme applications and hazardous conveying media. HERMETIC has now been admitted to the coveted World Market Leader Index of the University of St. Gallen, as reported by the magazine WirtschaftsWoche at the end of January. Among the selected businesses were 450 companies that succeeded in becoming number one in their specific sector. HERMETIC is listed as the 2018 Global Market Leader Champion in the “hermetically sealed centrifugal pumps (canned motor pumps)” sector.



“We are so excited about this commendation and it serves as an incentive for us to continue to further advance our position as a company where both tradition and innovation play an important role. The fact that we are now listed as World Market Leader of hermetically sealed centrifugal pumps helps reinforce our focus of combining quality, precision, and reliability as our core competency in conjunction with a structured strategy for growth.”

CCO Sebastian Dahlke

We are driven by passion for pump technology

Everything started with the delicious juice of the grape. In 1866, Wilhelm Lederle developed the first manual wine pump in Eendingen am Kaiserstuhl. The “mechanical workshop” he founded developed numerous groundbreaking pump designs. Everything revolves around the pumping of valuable, critical and hazardous fluids using “canned motor pumps” today. The passion for pump technology has characterised our company for more than 150 years. It is the driving force that brought us to the top of the world. Currently, over 280,000 HERMETIC pumps have been installed worldwide for the most demanding pumping applications.

About the World Market Leader Index

There are up to 1,500 companies combined in Germany, Austria and Switzerland considered to be world market leaders, depending on the index used. The World Market Leader Index kept by the University of St. Gallen and the Academy of German World Market Leaders (ADWM) has strict criteria and determines the world market leaders in a scientific assessment process. Only 450 companies make it into the desired ranking that is published in the WirtschaftsWoche every week.

Mehr: www.weltmarktfuehrerindex.de



High-tech for diesel desulphurisation

HERMETIC E-Line: highest safety at 112 bar and 405°C in refining

A renowned Chinese refinery trusts in the canned motor pump technology of HERMETIC in construction of a new diesel desulphurisation system. Developed precisely according to customer requirements, the pump solution of the E-Line ensures greatest safety and reliability at extreme system pressures and temperatures.

The diesel desulphurisation process includes a hydrogenation process that requires system pressures of more than 100 bar and temperatures of more than 400°C. Even the smallest leaks can cause fatal fires. In the case of the reactor circulation pump requiring a delivery rate of 1,000 m³/h and a delivery head of 65m, a well-known refiner in China relied on the great quality and expertise of HERMETIC and our engineers.

HERMETIC E-Line: Customised one-of-a-kind pumps

Every pump in the E-Line range is one of a kind. They are completely adjusted to your process conditions. Our engineering know-how, decades of experience with many different applications and a sophisticated development guarantee a customised product that offers just what counts: reliability at best safety.

Leakage-free pump solution in high-pressure designs

The core of the 10-ton pump system is a CNKfH+D 300-500 canned motor pump. The water-cooled motor of the pump according to API 685 has a shaft power of 185 kW. All pressure containing parts were made of forged solid materials. The housing is made of highly resistant SS 316 Ti stainless steel and has been tested at 310 bar. With a system pressure of 112 bar and an operating temperature of 405 degrees Celsius, the integrated, compact unit is designed for a nominal pressure of 130 bar. In addition to the rotor lining, the motor housing serves as a secondary containment, which provides a leak-free, safe pump solution.

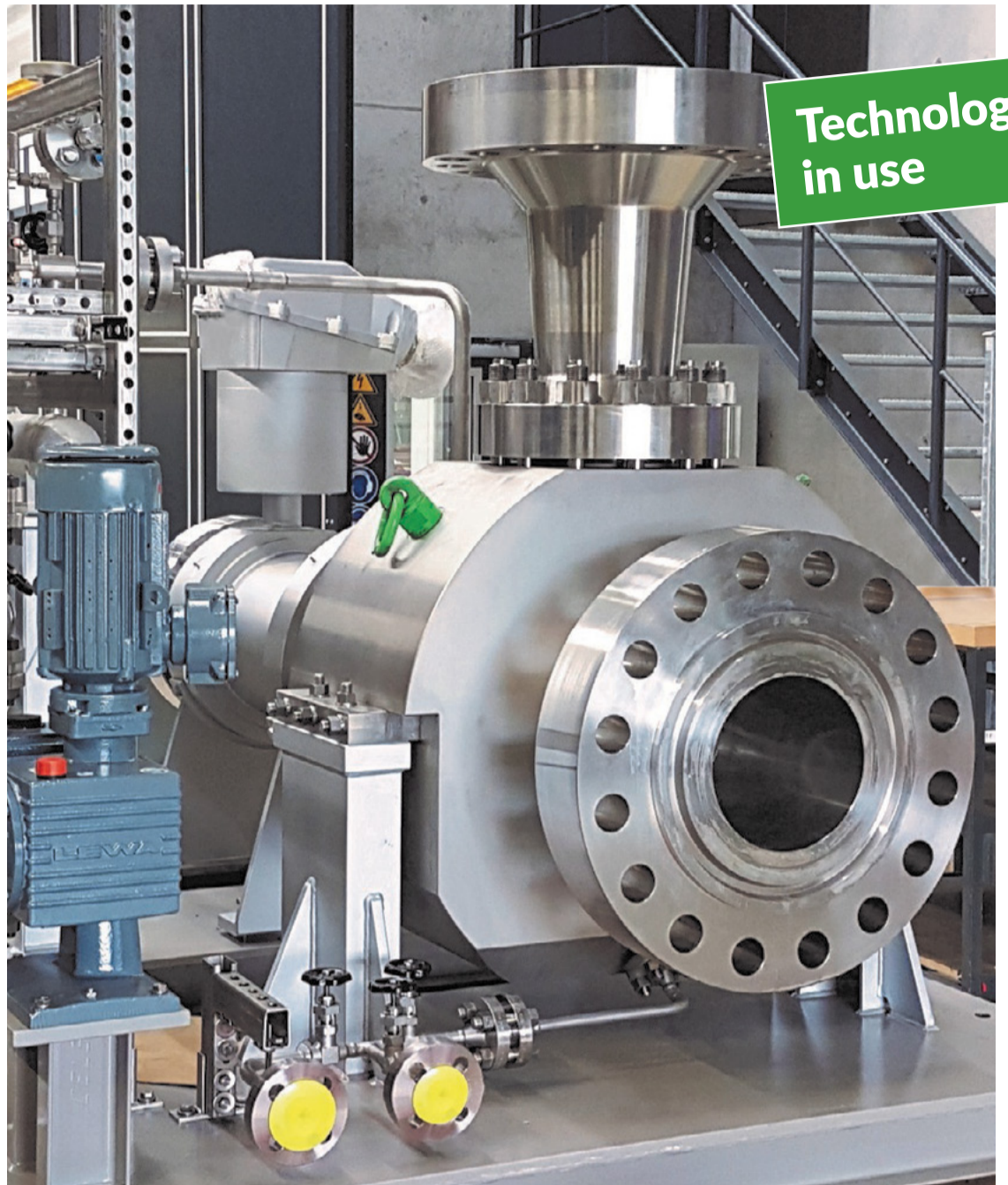
Low-wear and low-maintenance design principle

The design-related omission of wear-prone components such as shaft seals, couplings and bearings reduces the maintenance and repair costs and ensures a longer service life. The HERMETIC technology "ZART®" (Zero Axial and Radial Thrust) ensures that the rotor unit runs contact-free and wear-free. It is based on comprehensive axial thrust balancing in conjunction with hydrodynamic sleeve bearings. While relief mechanisms in the control unit continuously monitor the axial position of the pump shaft, a fine fluid film between the rotating and static sleeve bearing component allows a full "floating" of the rotor.

For the monitoring of the axial thrust balancing, the pump is equipped with the HERMETIC "MAP" technology. The rotor position monitoring detects the slightest plays in the rotor movement and serves as a kind of early warning system to prevent undesired operating conditions and expensive damage. Due to this hydraulic power balance, the HERMETIC pump operates without radial and axial wear, thus offering plant operators significantly longer service life.

Entire system with integrated measuring and control equipment

To ensure high availability and durability, the canned motor pump was provided with additional measuring



Canned motor pump in high-pressure design

and control equipment. To prevent potential motor and bearing damage, this particular process avoids gas accumulations on the motor side, which can escape from the pumped medium. A dosing pump precisely tailored to the application generates a fine, uniform counterflow in the rotor space, which prevents this. A level indicator integrated in the system monitoring indicates whether there is no gas in the circuit.

While a heat barrier prevents the heat transfer from the pump to the motor part, an external heat exchanger ensures the dissipation of motor heat loss. To prevent overheating, a temperature monitoring of the motor winding is integrated. Another sensor monitors the temperature of the motor cooling circuit, which ensures the cooling performance and the functional safety. Other components such as safety valves, an extensive testing and inspection procedures well as comprehensive documentation complete the scope of supply to a highly reliable system.

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Know-how & global service for the oil and gas industries

The hermetically sealed HERMETIC pump, extensive measuring and control equipment as well as rigorous tests and inspections, including X-ray inspections, vibration tests and ultrasonic tests, guarantee more than just safe pump solution with high availability for the plant operator. The decisive factor to the Chinese refinery included our know-how and experience with the complex challenges of large industrial oil and gas plants. HERMETIC pumps are currently proving their safety and performance in 15 large refineries. The customer also valued our local presence with a joint venture, production sites and service branches in China, and the support from our experts on site.

Certified for use on ships

Our canned motor pumps reaffirmed according to the 'Russian Maritime Register'



Re-certification of our coolant pumps according to the "Russian Maritime Register of Shipping" (RMRS) is another step in development of our market position on the Russian market. Certification for maritime applications took place at the end of 2018. It includes single- and multi-stage canned motor pumps of the CNF and CAM series.

We develop and produce most of our canned motor pumps for the refrigeration industry. The conveyed media usually are natural coolants such as ammonia (NH_3) and carbon dioxide (CO_2). Our canned motor pumps are also in increasingly high demand for the transport of water-glycol mixtures. This is due to the extraordinarily long Mean Time Between Failures (MTBF) and the resulting economic benefits of the canned motor pump technology by HERMETIC.

Reliable, maintenance-free technology for maritime applications

As in refrigeration systems of food technology and deep freezing, refrigerant pumps on ships must be exceptionally reliable. Typical applications include floating cold stores on fish trawlers where a failure of

the pumps cannot be tolerated. The lack of using any dynamic seals, such as mechanical seals, and contact-free operation on hydrodynamic bearings allow maintenance-free operation and increase the average service life of HERMETIC pumps enormously. For example, the latest generation of refrigerant pumps, the HERMETIC LC pump, designed specifically for liquid cooling, achieves typical MTBF values of 10^5 hours. HERMETIC pumps are used in marine technology for superheated water, i.e. water with temperatures above 100°C and for cooling offshore wind turbines.

HERMETIC – traditionally strong in the Russian market

Traditionally, HERMETIC has a strong presence in the Russian market in all applications needing canned motors. In addition to RMRS certification, certificates of the Russian TR directive for machines and for explosion protection are also available. An overview of the certificates is available online at www.hermetic-pumpen.com/en/downloads/certificates.

Star Pump Alliance as our guest

HERMETIC hosts the 2nd SPA Member-Workshop in Gundelfingen

The second meeting of the Star Pump Alliance member companies took place at HERMETIC's site in Gundelfingen in February 2019. Its subject was strategic alignment of the www.starpumpalliance.com Internet platform, which bundles knowledge around pump technology for professional users. The object of the workshop included optimisation of the

SPA Pump Selector. In the usual constructive exchange, the experts developed an even more customer-friendly entrance into the innovative, manufacturer-comprehensive selection tool together to make digital queries easier for users. Learn more at: www.starpumpalliance.com/pump-selector

About Star Pump Alliance (SPA)

In order to use the opportunities of digitalisation even better, HERMETIC-Pumpen GmbH founded Star Pump Alliance GmbH with two other renowned German pump manufacturers in 2018. The web platform www.starpumpalliance.com gives professional industrial pump users access to all technologies. The "SPA-Selector" lets you choose the best pumping

technology for your specific application and send your request directly to participating manufacturers. A manufacturer will send you an offer or contact you within 48 hours.



Dates

Trade fairs

HERMETIC is represented at numerous trade fairs at home and abroad. We look forward to your visit. If you would like a personal meeting, please contact us in advance: messen@hermetic-pumpen.com

- **PUMP SYMPOSIUM, Houston, USA**
10–12 September 2019
- **ARGENTINA OIL & GAS, Buenos Aires, Argentina**
23–26 September 2019
- **Intern. Rotating Equipment Conference, Wiesbaden, Germany**
24–25 September 2019
- **RETA, Las Vegas, USA**
08–11 October 2019
- **ADIPEC, Abu Dhabi, UAE**
11–14 November 2019

Training

With our training courses we turn you into a pump expert. Whether beginner or expert, whether plant operator / owner, project engineer or plant engineer. We adapt our training courses to your wishes and requirements.

- **Seminar S01, 10 October 2019**
Die Spaltröhrenmotorpumpe in der Anlage und Explosionsschutz von Spaltröhrenmotor-pumpen
- **Seminar S02, 23+ 24 October 2019**
Instandhaltung von Spaltröhrenmotor-pumpen
- **Seminar S11, 06 November 2019**
The installed canned motor pump and explosion protection of canned motor pumps
- **Seminar S21, 27+ 28 November 2019**
Maintenance of canned motor pumps

Learn more at: www.hermetic-pumpen.com/en/service/seminars. Registration documents are available at the same address. Please send any further question to: seminare@hermetic-pumpen.com

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