

Reliable Precision
KNF Diaphragm Pumps in Instrumental Analysis

Applications for KNF Gas and Liquid Pumps:

- Sample preparation
- HPLC/GC
- Mass spectrometry with all detector types
- Elemental analysis
- TOC
- Calorimetry
- Titration
- Dissolution
- Electrophoresis

KNF Gas and Liquid Pumps

For Dependable Results

Precision is the central requirement of instrumental analysis. Valid measurement results are needed for important decisions, when it comes to nothing less than the protection of people and the environment. In research, they are a prerequisite to drawing the right conclusions and advancing development. Dependable results can be achieved when components and functions interact precisely at each individual process step.

As the long-time solutions provider for well-known manufacturers of devices for routine and high-end analysis, we are familiar with this requirement. We bring our entire expertise to the table to deliver you a technically suitable pump, and additionally create advantages that provide you with added value. Along the way, we take into account the ever-growing market demand for faster analytics, ease of operations and cost efficiency. Together we will achieve the optimum!

Competence creates trust

KNF impresses with outstanding engineering know-how. Thanks to our modular system we are able to adapt our many series models to specific requirements quickly and cost-effectively, thereby implementing your specifications exactly. You can rely on this flexibility and quality of support from KNF for large as well as small lot sizes.

Control What Matters

Intelligent pump features designed to manage complexity.



KNF Intelligent Features

Intelligence brings calm to complex systems. Our pumps with intelligent features give engineers the peace of mind to focus on what really matters – maximum certainty, no surprises. With our features for advanced pump control, you manage your system automatically and with ease, exactly when it matters most.

Pressure Control
Steady, reliable, and precise pressure levels for gas diaphragm pumps

Vacuum Control
Consistent, reliable and precise vacuum under changing conditions

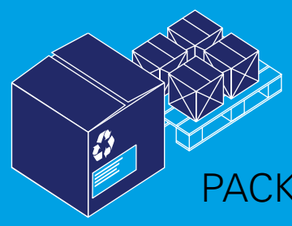
Flow Control
Steady, reliable, and precise flow rates for liquid diaphragm pumps

Versatile Dosing
Dosing liquids with maximum precision and accuracy made simple

Visit **knf.com/control-what-matters** to learn more about our cutting-edge intelligent pump features.

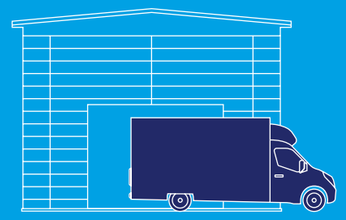
Flexible Support From Start to Finish – Your Added Value Is Our Priority

With KNF, flexibility doesn't stop at the technical solution. We fulfill your individual requests every step of the way until delivery and service.



PACKAGING

We'll be happy to implement any measures that make life easier for your goods receiving department, as well as to support your efforts toward recycling and environmental protection.



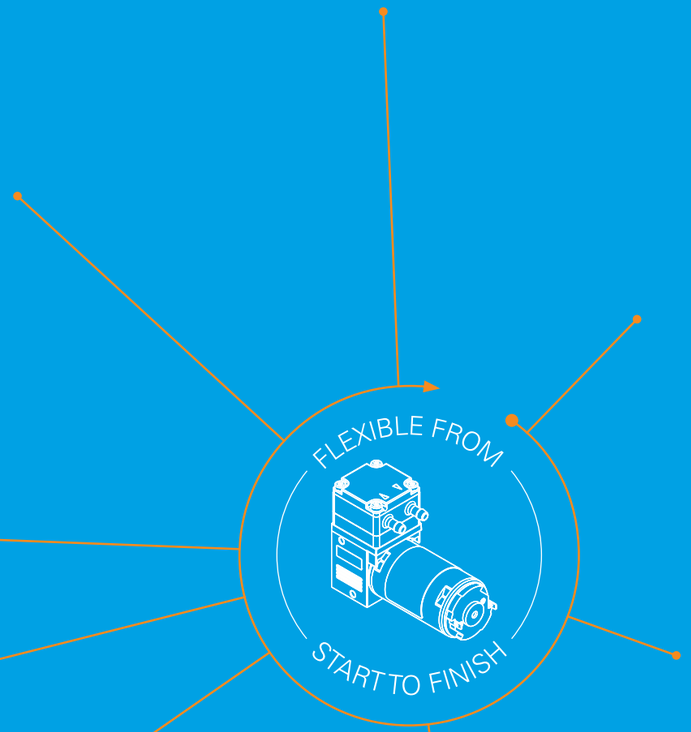
LOGISTICS

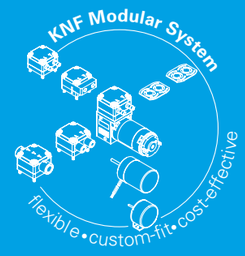
We support all types of production lot ordering – including Kanban, VMI, CMI, B2B and others.



SERVICE

We implement custom-fit service concepts for you. It is important to us to minimize the overall running costs of our pumps, and we take this into account in the pricing of replacement parts.





~3,000

customized adaptations are carried out at KNF every year for all our customers worldwide – quickly and inexpensively thanks to our modular system. We also develop exclusive pumps and drive concepts for individual customers.



DOCUMENTATION

Together, we'll define the type, scope and design of the documentation.

100%

We inspect and test 100% in line with your requests.

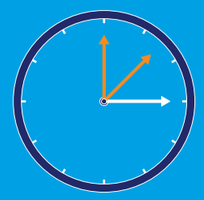


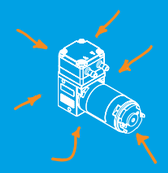
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PRODUCTION

You can rely on the flexibility and quality of our support for every order with KNF, from large lot sizes to a single pump.





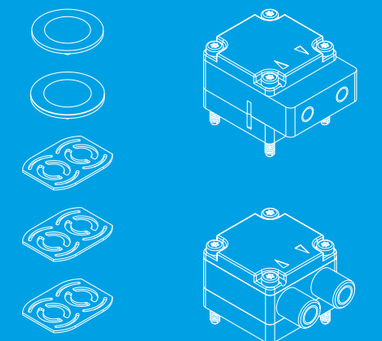
"ASSEMBLY AND ENGINEERING IN ONE"

We will provide you with the pump as an assembly. This may include completing steps in the production process or installing components such as a valve block, sensors, tubing etc.

Material Options

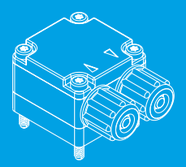
Valve/Diaphragm:
EPDM, FKM, FFKM, HNBR, stainless steel and others

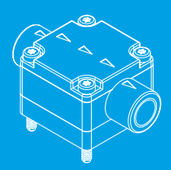
Pump head:
PP, PPS, fluoroplastics, stainless steel, aluminum and others

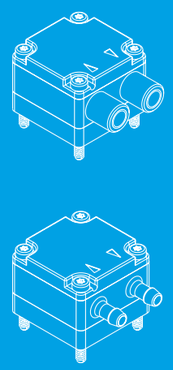


Mechanical Options

Circuit points and connections

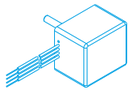


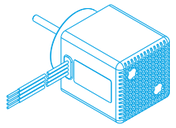


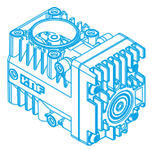


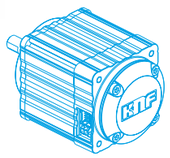
Motor Options

"DIGITAL CUSTOMIZATION" sets our brushless DC motors apart, allowing for their unique configuration. And we do mean unique. We develop and produce these motors ourselves or as part of an exclusive development partnership with a leading motor manufacturer. These motors map complex operating profiles, including required safety parameters. Your advantage: high energy efficiency, precisely controlled target variables and simple control via digital signals.

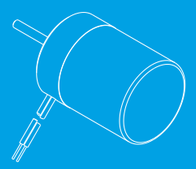


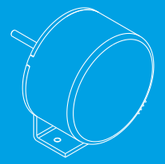


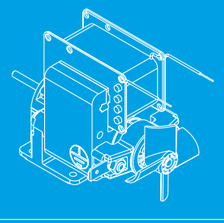




Explosion-proof versions and all common voltage configurations available.
Motor types: DC, DC-B, AC.







KNF Modular System

Custom-Fit From Standard to High-End

Every application is different and some are one of a kind. Our modular system is designed to give you a high degree of flexibility, speed and reliability. You can be sure that every gas and liquid pump supplied by KNF will exactly meet your requirements, no matter how complex or unusual these might be.

Series models – the first step to customized pumps
KNF offers a range of up to 90 series models designed for handling gases and liquids. The performances of these are described in our data sheets.

The KNF modular system for creating customized pumps
By selecting and combining a variety of options, ranging from the material used to make the pump components that come into contact with the media, to the drive and the mechanical elements such as the circuit points and connections, it is easy to tailor every series model to meet application-specific requirements.
The configurations created by the KNF modular system are based on tried and tested individual components, meaning that developing customized pumps is quick and inexpensive.

Project pumps – precisely designed for the application
We support your development project by providing you with sample pumps quickly and easily. In consultation with you, our employees from the sales, engineering, and product management divisions determine the modifications to be made to the product's standard technical parameters.

	Micro-Diaphragm Gas Pumps	Diaphragm Gas Pumps	Diaphragm Liquid Pumps			Swing Piston Pumps
Sample Preparation	**NMP 03 to NMP 850.1.2 HP, NVC 830** Flow rate: 0.3–15 (l/min) Vacuum: max. 50 (mbar abs.) Pressure: max. 3 (bar g) ■ quiet and nearly vibration-free	**N 96** Flow rate: 8.5 (l/min) Vacuum: max. 100 (mbar abs.) Pressure: max. 2.5 (bar) ■ compact and high-performing	**FMM 20 to FL 10** Flow rate: 18–100 (ml/min) Pressure height: max. 10 (mWg) Suction height: max. 4 (mWg) ■ low operating costs thanks to durability and maintenance-free design	**NF 5 to NF 2.35** Flow rate: 5–650 (ml/min) Pressure height: max. 16 (bar g) Suction height: max. 6 (mWg) ■ safe handling of aggressive, low-viscosity media	**FP 7 to FP 1.400, FMS 1.400** Flow rate: 0.06–4.6 (l/min) Pressure height: max. 6 (bar g) Suction height: max. 3 (mWs) ■ excellent adjustability, gentle transfer and quiet operation (and particularly low pulsation)	
Transfer of Liquid and Gaseous Samples for Analysis	**NMP 03 to NMP 850.1.2 HP** Flow rate: 0.3–15 (l/min) Vacuum: max. 50 (mbar abs.) Pressure: max. 3 (bar g) ■ small, quiet, low power demand – perfect for portable and/or battery-operated analytical systems	**N 86 to N 838** Flow rate: 5.5–60 (l/min) Vacuum: max. 0.5 (mbar abs.) Pressure: max. 2.5 (bar g) ■ highly chemically resistant	**FEM 1.02 to FL 10** Flow rate: 0.2–100 (ml/min) Pressure height: max. 60 (mWg) Suction height: max. 4 (mWg) ■ compact for simple device integration	**FF 12/20 to NF 1.60** Flow rate: 130–650 (ml/min) Pressure height: max. 60 (mWg) Suction height: max. 6 (mWg) ■ uncontaminated transfer of liquid samples	**FP 7 to FP 1.400, FMS 1.400** Flow rate: 0.06–4.6 (l/min) Pressure height: max. 6 (bar g) Suction height: max. 3 (mWs) ■ self-priming, safe to run dry and with minimal pulsation	**NF 2.35** Flow rate: 350 (ml/min) Pressure height: max. 16 (bar g) Suction height: max. 3 (mWg) ■ pump head uses PEEK for outstanding chemical resistance	**NPK 03 to NPK 09** Flow rate: 2.7–24 (l/min) Vacuum: max. 100 (mbar abs.) Pressure: max. 7 (bar g) ■ high pressure, compact design
Disposal of Sample Waste	**NMP 820 to NMP 850.1.2 HP** Flow rate: 2.1–15 (l/min) Vacuum: max. 50 (mbar abs.) Pressure: max. 3 (bar g) ■ durable and robust against humidity and condensate	**MGP 75, N 86.0, N 816, N 838.1.2, N 938, N 940** Flow rate: 4.5 – 78 (l/min) Vacuum: max. 1.5 (mbar abs.) Pressure: max. 1 (bar g) ■ Pressure Control ■ collecting containers are evacuated quickly and reliably	**NF 30, NFB 30, NF 300** Flow rate: 0.3–3 (l/min) Pressure height: max. 10 (mWg) Suction height: max. 6 (mWg) ■ resistant to aggressive waste mixtures				
Degassing	**NMP 820 to NMP 850.1.2 HP, NVC 830** Flow rate: 2.1 – 15 (l/min) Vacuum: max. 55 (mbar abs.) Pressure: max. 3 (bar g) ■ Vacuum Control ■ perfect size for use in HPLC degassers	**N 84.3 to N 838** Flow rate: 4.2–60 (l/min) Vacuum: max. 0.5 (mbar abs.) Pressure: max. 1 (bar g) ■ effective removal of dissolved air from the samples for precise analysis results					
Pre-Vacuum for Mass Spectrometry and Evacuating the Measurement Cell		**N 84.3 to N 880.3, NVC, MGP 75** Flow rate: 4.2–80 (l/min) Vacuum: max. 0.5 (mbar abs.) Pressure: max. 1 (bar g) ■ stable vacuum for the transfer of pressure to the turbopump					
Dosing			**FD 1.200** Flow rate: 40 – 65 (l/min) Vacuum: max. 0.5 (mbar abs.) Pressure: max. 6 (bar g) ■ Versatile Dosing ■ Shot volume range from 50 to 200 microliters				

Our Best Pump Series Models for Demanding Instrumental Analysis Tasks

Thanks to the KNF modular system, each of our series models can be quickly and inexpensively adapted to suit the specific needs of an application.

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KNF reserves the right to make technical changes without notice. KNF 02/2026. Printed in Germany.