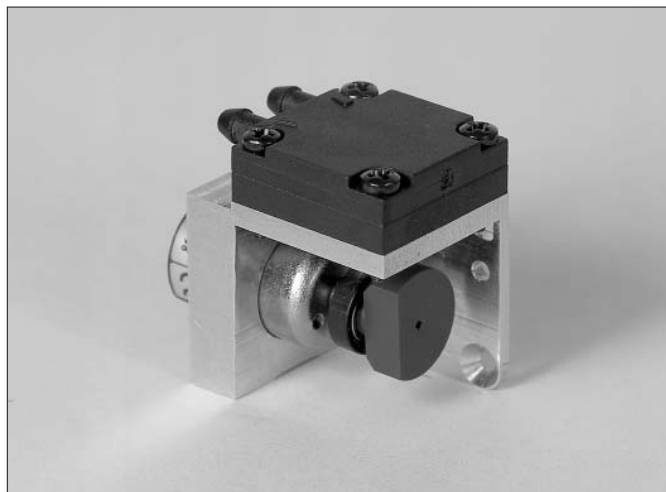


Micro Diaphragm Pumps

INNOVATIVE
TECHNOLOGY
WORLDWIDE



Series NMP 09 L + NMP 09 B

Micro Diaphragm Gas Sampling Pumps

TECHNICAL FEATURES:

- Uncontaminated flow
- No contamination of the media due to oil-free operation
- Compact size due to structured diaphragm
- Maintenance-free
- High pneumatic performance because of structured diaphragm
- Low aerodynamic loss by means of a new valve system
- High level of gas tightness thanks to the closed diaphragm surface and special sealing system
- Can operate in any installed position

CONCEPT

The Micro Diaphragm Gas Sampling Pumps from KNF are based on a simple principal - an elastic diaphragm, fixed on its edge, moves up and down its central point by means of an eccentric. In this way the medium is transferred using automatic valves.

The new range of KNF Micro Pumps is for the first time equipped with the patented stress-optimised structured diaphragm, resulting in a high pneumatic performance, a durable product and compact size. New, very efficient valves and sealing systems as well as the precise placement of the pump head are some of the other technical features we can offer.

For pump drive we provide a selection of dc motors with various levels of performance, durability and price.

AREAS OF USE

KNF Micro Diaphragm Pumps are used frequently in the fields of analysis and medicine.

For instance as pumps for gas measurement, for example for sampling environmental conditions in the workplace, or for exhaust gas and smoke analysis or built into machines for measuring blood pressure.

As they are dc driven, the micro diaphragm pumps are suited for use in portable and stand-alone equipment.

For the version with brushless dc motor the following also apply:

- No sparks
- Safe and reliable constant use
- Particular long durability

PERFORMANCE DATA

Type	Delivery (l/min)	Vacuum (mbar absolute)	atm. Press.	Pressure (bar g)	Weight (g)
NMP 09 L (dc motor with iron-free rotor, longlife)	0.85	500		0.35	29.5
NMP 09 B (brushless dc motor)	0.75	500		0.5	24.5

More information about dc motors you find on page 3.

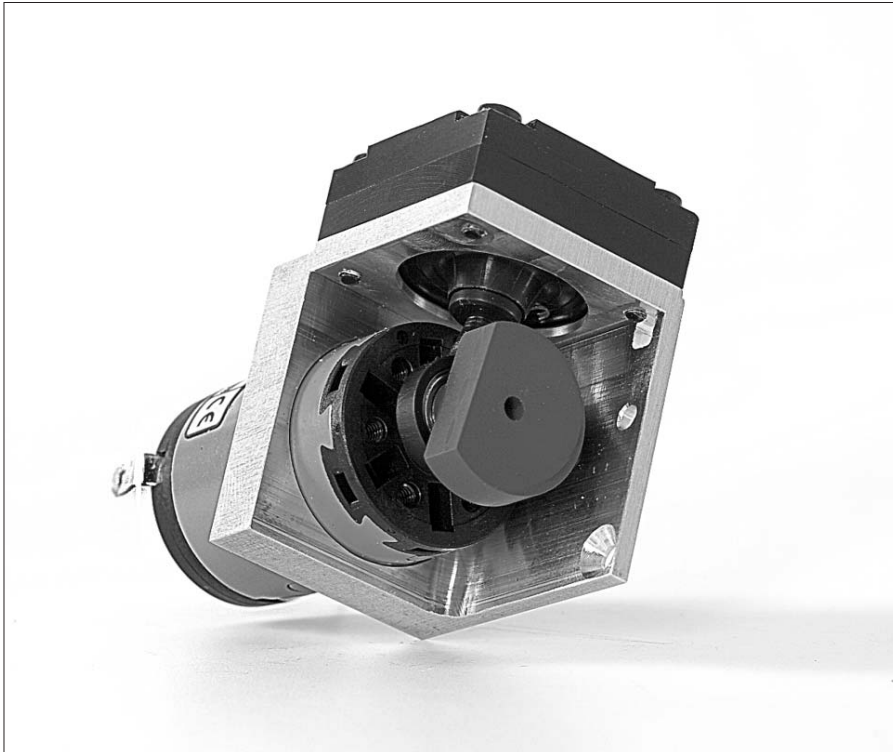
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TECHNICAL INFORMATION

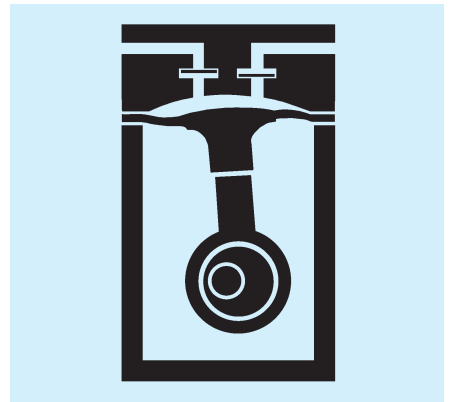
MICRO DIAPHRAGM GAS SAMPLING PUMPS WITH THE WORLD SMALLEST STRUCTURED DIAPHRAGM!



FUNCTION OF KNF MICRO DIAPHRAGM GAS SAMPLING PUMPS

An elastic diaphragm is moved up and down by an eccentric (see illustration). On the down-stroke it draws the air or gas being handled through the inlet valve. On the up-stroke the diaphragm forces the medium through the exhaust valve and out of the head. The compression chamber is hermetically separated from the drive mechanism by the diaphragm. The pumps transfer, evacuate and compress completely oil-free.

Diaphragm pump



MODEL CODE FOR EASY ORDERING

The model code is identical to the order number. It is made up as follows:



- Base model
- DC motor - drive option
- Other motor data eg.:

DRIVE OPTIONS

Our Micro Diaphragm Pumps are available with different drive motors:

L - DC motor with iron-free rotor

The pump is equipped with a dc motor which is based on the same technology as the M model but is even more robust and durable. This drive is ideal for higher operational.

B - brushless DC motor

The pump is equipped with a brushless electronically commutated dc motor (electronics integrated in motor). The motor runs vibration and spark free, almost silently, is very dynamic and extremely durable. This model can be used permanently at all pressure levels.

The models **NMP 09 L** and **NMP 09 B** pass the EU guideline 89/336 for EMC.

In our extensive program you are sure to find the pump you need for your particular application.

KNF - the competent partner for vacuum and compressor technology. Especially for unusual problems. Call us and talk to our application engineers.