

MICRO DIAPHRAGM GAS SAMPLING PUMPS DATA SHEET E 009



NMS 030.1.2 DC-B, 2-WIRE



NMS 030.1.2 DC-B4, 4-WIRE



NMS 030.1.2 DC-M

Concept

KNF micro diaphragm pumps are based on reciprocating displacement pump technology. An eccentric system transforms the circular movement of the motor shaft into an oscillating movement, which is applied to the diaphragm via a connecting rod. Working in conjunction with the inlet and outlet valves, the movement of the diaphragm generates the actual pump operation.

Applications

KNF micro diaphragm pumps are often used for analyses and in medical technology. For example, as gas sampling pumps for sampling ambient air at workplaces, for waste gas and flue gas analysis or installed in blood pressure gauges. Because of their DC drives, the micro diaphragm pumps are also suitable for portable, self-contained devices. The outstanding controllability of the NMS 030 makes it especially suitable for negative pressure wound therapy.

Characteristics

- Uncontaminated transfer
- Maintenance-free
- High pneumatic capacity
- Small size
- Low pulsation
- Low power consumption
- Can be installed in virtually any position
- High gas-tightness
- Internally ported

Drive variants

NMS 030 micro diaphragm pumps are available with three different motors:

Brushed DC motor DC-M

The pump is equipped with a standard DC motor.

Brushless DC motor DC-B, 2-wire

These motors are electronically commutated. Consequently, there is no brush friction. The motor runs without vibration or sparks, is almost silent, has a high dynamic response and an especially long service life. These pumps can be used continuously across the entire pressure range.

Brushless DC motor DC-B4, 4-wire

In addition to the 2-wire version, the 4-wire version has an input control signal V CTRL 0 -7V and a frequency output 18 pulses / rotation. This enables infinitely variable flow control and the development of control loops.

KNF modular system

The KNF modular system includes a wide range of standard materials, motors and voltages from which the ideal solution can be chosen for specific project-related tasks.

Technical information

Accessories, such as silencers and vibration dampeners are available on request.

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PERFORMANCE DATA					
Type	Flow rate (l/min)	Ultimate vacuum (mbar absolute)	atm. pressure	Overpressure (bar)	Weight (g)
NMS 030.1.2 DC-M (Standard DC motor)	11	200		0.2	348
NMS 030.1.2 DC-B (Brushless motor 2-wire)	10.5	200		0.2	218
NMS 030.1.2 DC-B4 (Brushless motor 4-wire)	1-12	200		0.2	218

NMS 030.1.2 DC-B

PERFORMANCE DATA

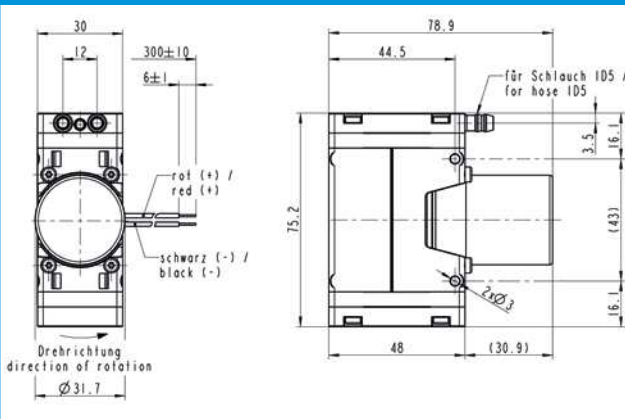
Type	Voltage (V)	Flow rate (l/min) ¹⁾	Permissible pressure (bar)	Permissible vacuum (mbar)
NMS 030.1.2 DC-B	12	10.5	0.2	200
NMS 030.1.2 DC-B	24	10.5	0.2	200
NMS 030.1.2 DC-B4	12	1-9.5	0.2	200
NMS 030.1.2 DC-B4	24	1-12	0.2	200

¹⁾ Liter at STP

PUMP MATERIAL

Pump head	Diaphragm	Valves
PPS	EPDM	EPDM

NMS 030.1.2 DC-B



NMS 030.1.2 DC-M

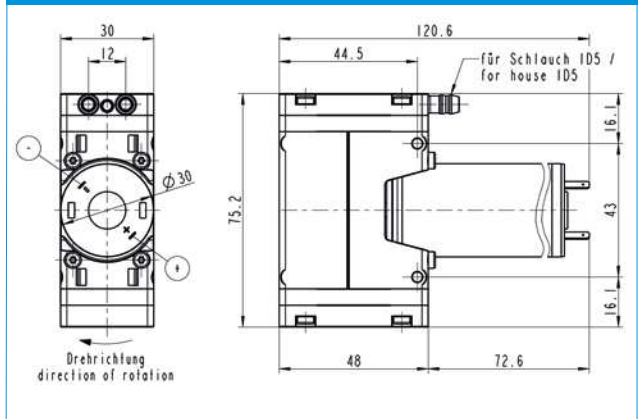
PERFORMANCE DATA

Type	Voltage (V)	Flow rate (l/min) ¹⁾	Permissible pressure (bar)	Permissible vacuum (mbar)
NMS 030.1.2 DC-M	12	11.5	0.2	200
NMS 030.1.2 DC-M	24	11.5	0.2	200

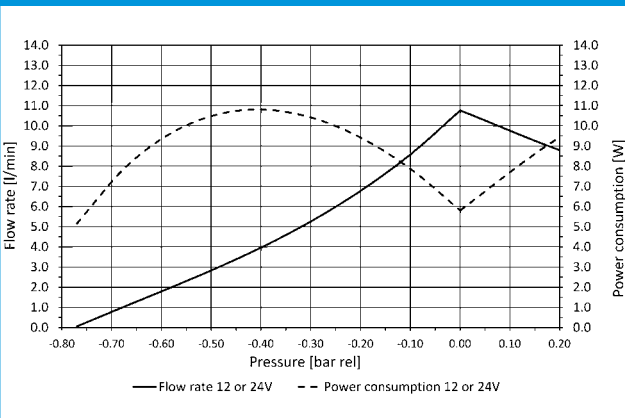
PUMP MATERIAL

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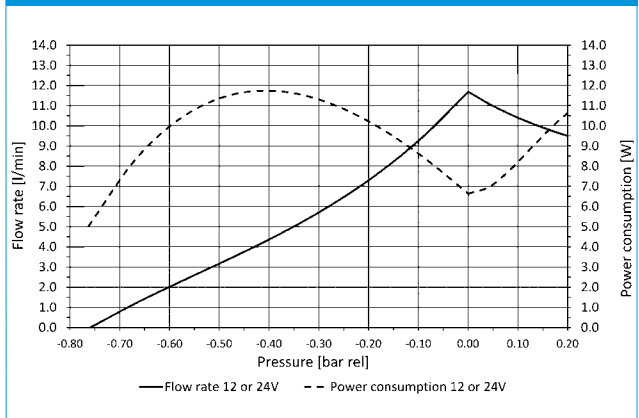
NMS 030.1.2 DC-M



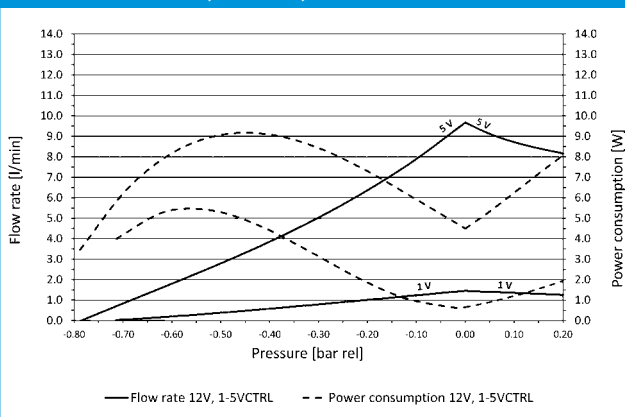
NMS 030.1.2 KPDC-B, 2 WIRES, 12/24 V



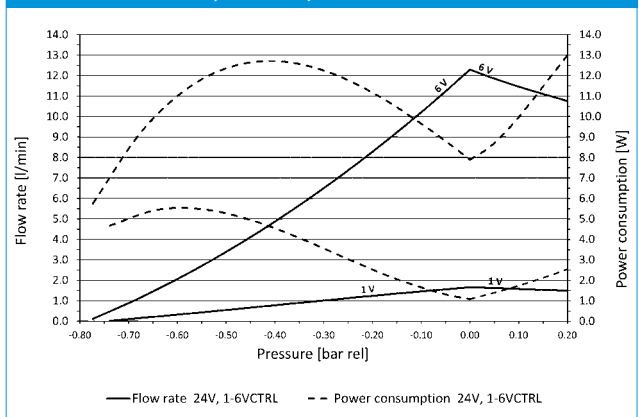
NMS 030.1.2 KPDC-M, 2 WIRES, 12/24 V



NMS 030.1.2 KPDC-B, 4 WIRES, 12 V



NMS 030.1.2 KPDC-B, 4 WIRES, 24 V



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