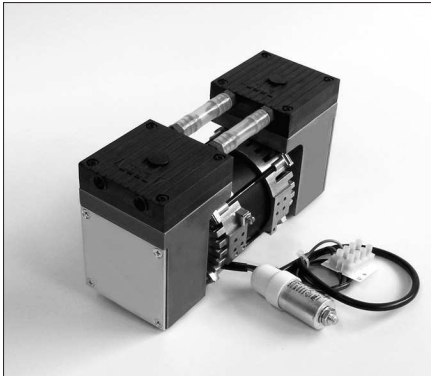


MINI DIAPHRAGM VACUUM PUMPS

DATA SHEET E 029



N 838.1.2 KNE



N 838.1.2 KNDC-B

Concept

The mini diaphragm vacuum 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 pumps are equipped with the patented stress-optimised structured diaphragm, resulting in a high pneumatic performance, a durable product and compact size. Special valves ensure that the product can cope easily with vapor and condensation.

Thanks to the KNF modular system, the parts used to transfer the gases can be made from materials with varying degrees of durability. Various motors are available for pump drive.

Features

Uncontaminated flow

No contamination of the media due to oil-free operation

Maintenance-free

Compact size

due to structured diaphragm

High performance

because of structured diaphragm

High level of gas tightness

Long product life

thanks to structured diaphragm

Very quiet and little vibration

Copes well with vapor and condensation

Cool running motor

even when in constant use

Ready for assembly

Can operate in any installed position

Areas of use

The mini diaphragm vacuum pumps offer a high level of performance despite their small size, as well as an excellent price performance ratio. They are required especially in the fields of analysis, medicine and production technology.

The pumps are used for sucking gases, taking samples (even liquids in a vacuum) and evacuating vessels.

Performance data

Type	Delivery (l/min)	Vacuum (mbar absolute)	atm. Press.	Pressure (bar g)	Weight (kg)
N 838.1.2 KNE	42	90		0.5	4.7
N 838.1.2 KNDC-B	60	100		0.5	3.0
N 838.1.2 KN.29DC-B	60	100		0.5	3.0

N 838.1.2 KNE

Performance data

Type	Delivery at atm. pressure (l/min) ¹⁾	Max. operating pressure (bar)	Ultimate vacuum (mbar abs.)
N 838.1.2 KNE	42	0.5	90

¹⁾ Liter at STP

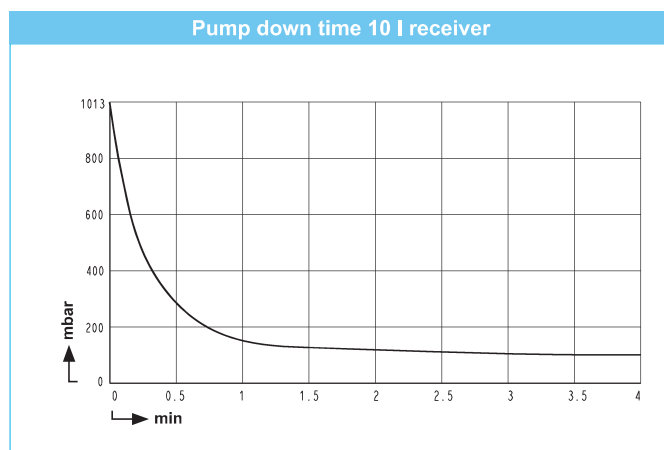
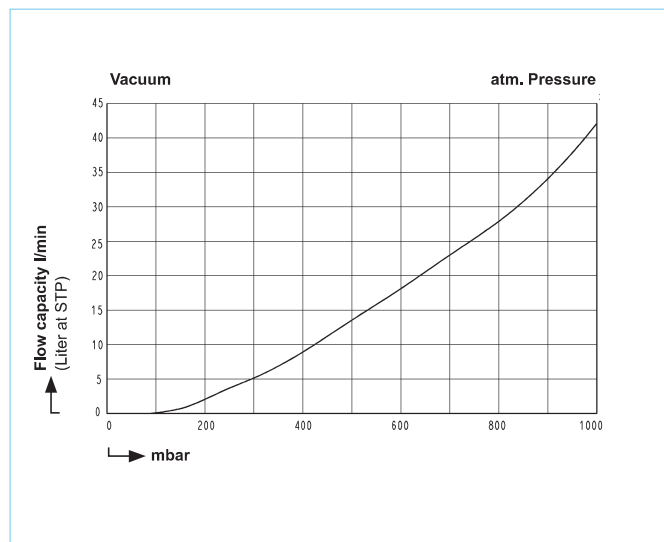
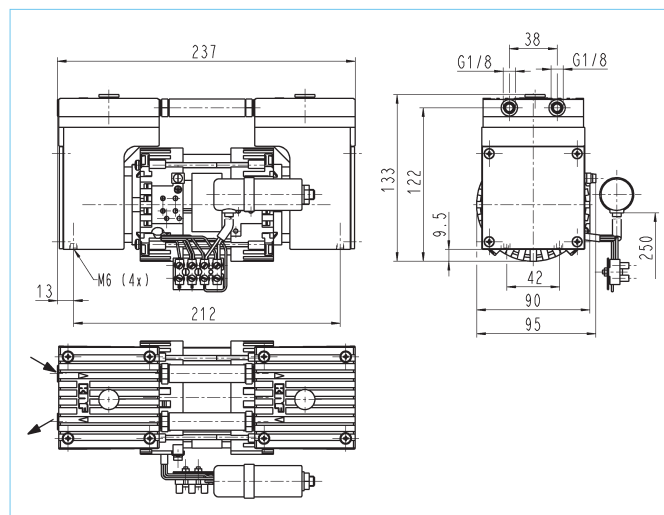
Motor data

Protection class	IP 20
Voltage/Frequencies (V/Hz)	230/50
Power P1 (W)	70
I _{max} (A)	0.5

Motors with other voltages, frequencies and protection classes on request.

Pump material

Type	Pump head	Diaphragm	Valve plates/sealings
N 838.1.2 KNE	PPS	EPDM	EPDM



N 838.1.2 KNDC-B | KN.29DC-B

Performance data

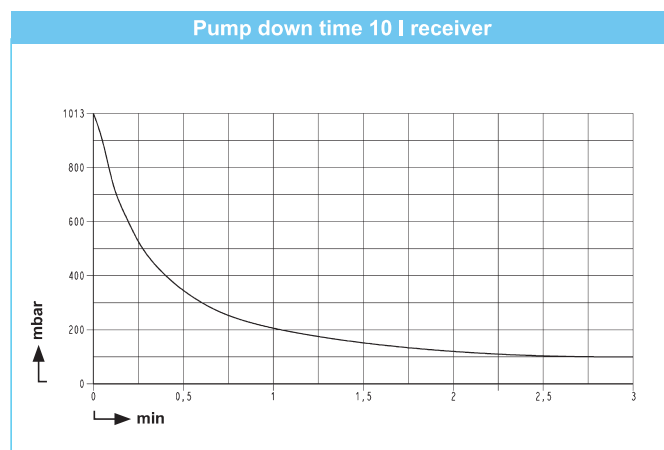
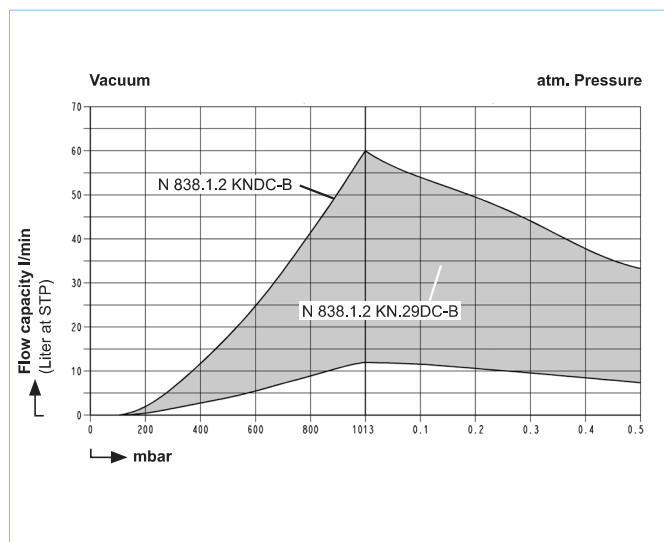
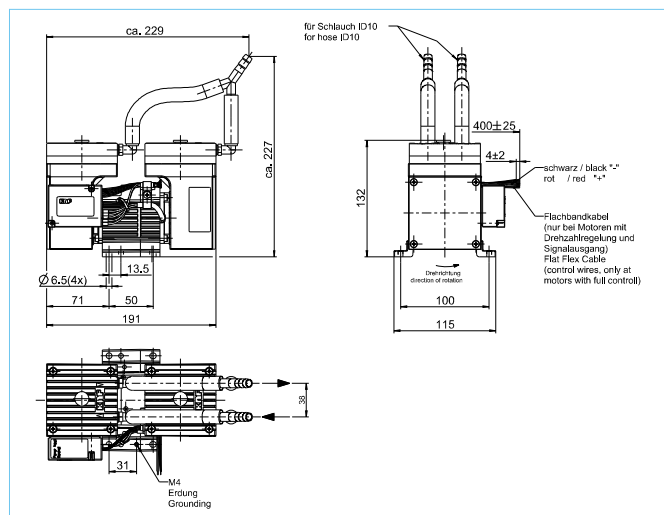
Type	Delivery at atm. pressure (l/min) ¹⁾	Max. operating pressure (bar)	Ultimate vacuum (mbar abs.)
N 838.1.2 KNDC-B	60	0.5	100
N 838.1.2 KN.29DC-B	12-60	0.5	100

Motor data

Protection class	IP 20
Voltage (V)	24
Power P1 (W)	101
I _{max} (A)	4.2

Pump material

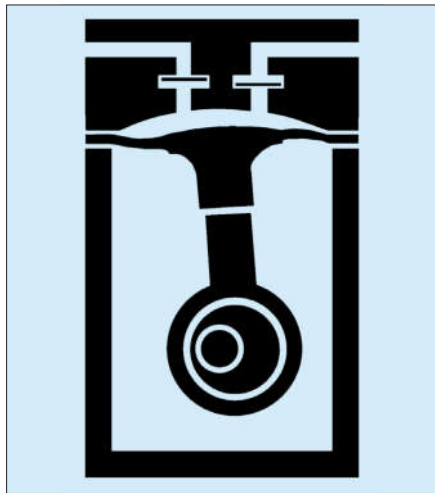
Type	Pump head	Diaphragm	Valve plates/sealings
N 838.1.2 KN...	PPS	EPDM	FPM



HINTS ON FUNCTION, INSTALLATION AND TECHNIQUE

Function of KNF 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.



Hints on installation and operation

- Range of use: Transferring air and gases at temperatures between +5 °C and +40 °C.
- Use chemically resistant version for aggressive gases and vapors.
- Permissible ambient temperature: between +5 °C and +40 °C.
- Please check the compatibility of the materials of the pump head, diaphragm and valves with the medium.
- The KNF product line contains pumps suitable for pumping aggressive gases and vapors - please contact us.
- The standard pumps are not suitable for use in areas where there is a risk of explosion. In these cases there are other products in the KNF program - please ask us for details.
- The pumps are not designed to start against pressure or vacuum; when a pump is switched on the pressure in the suction and pressure lines must be atmospheric. Pumps that start against pressure or vacuum are available on request.
- To prevent the maximum operating pressure being exceeded, restriction or regulation of the air flow should only be carried out in the suction line.
- Install the pump so that the fan can draw in sufficient cooling air.
- Fit the pump at the highest point in the system, so that condensate cannot collect in the head of the pump - that prolongs working-life.

Accessories		
Description	Order No.	Details
Silencer	055266	for tube ID 10
Vibration damping (4 x)	014114	D 20x15, 2x M 6x10 out side

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