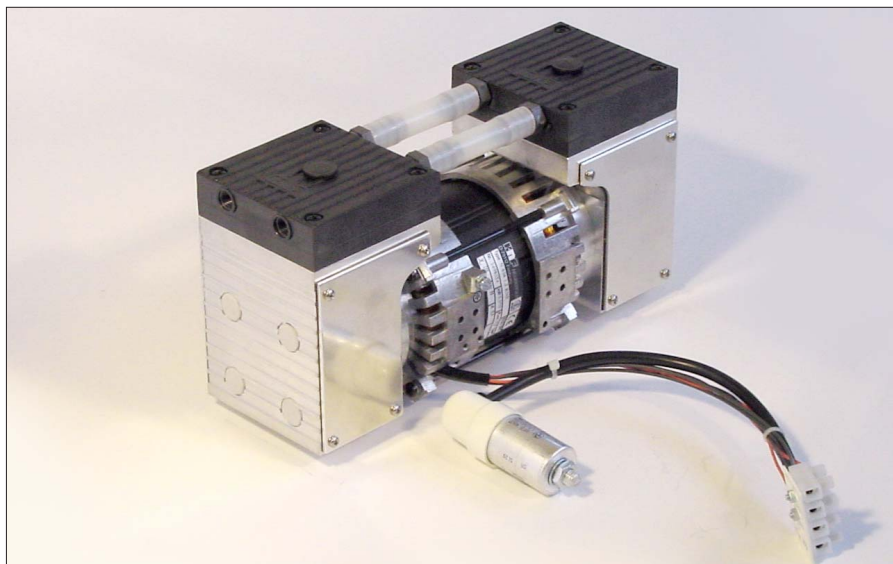


MINI DIAPHRAGM VACUUM PUMP

DATA SHEET E 029



N 838.1.2 KNE

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 vapour 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 AC 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 vapour and condensation

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.

The AC models are suited for use in machinery which is permanent or mains-operated.

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 KNE

PERFORMANCE DATA

Type and Order No. ³⁾	Delivery at atm. pressure (l/min) ¹⁾	Max. operating pressure (bar g) ²⁾	Ultimate vacuum (mbar abs.)
N 838.1.2 KNE	42	0,5	90

¹⁾ Litre at STP ²⁾ Continuous running

MOTOR DATA

Protection class	IP 20		
Voltage/Frequencies (V/Hz)	230/50		
Power P ₁ (W)	70		
Operating current (A)	0,4		

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

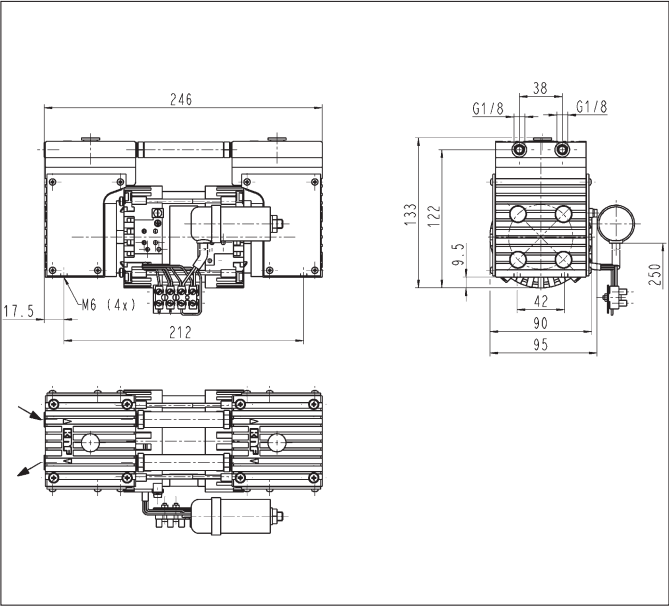
MODEL CODES AND MATERIALS

Type and Order No. ³⁾	Pump head	Diaphragm	Valves/gasket
N 838.1.2 KNE	Ryton ⁴⁾	EPDM	EPDM

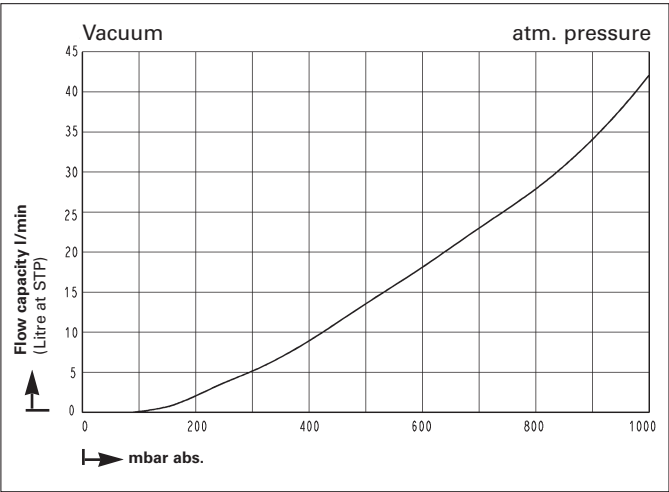
³⁾ See also „MODEL CODE FOR EASY ORDERING“

⁴⁾ Phillips Petroleum registered trademark

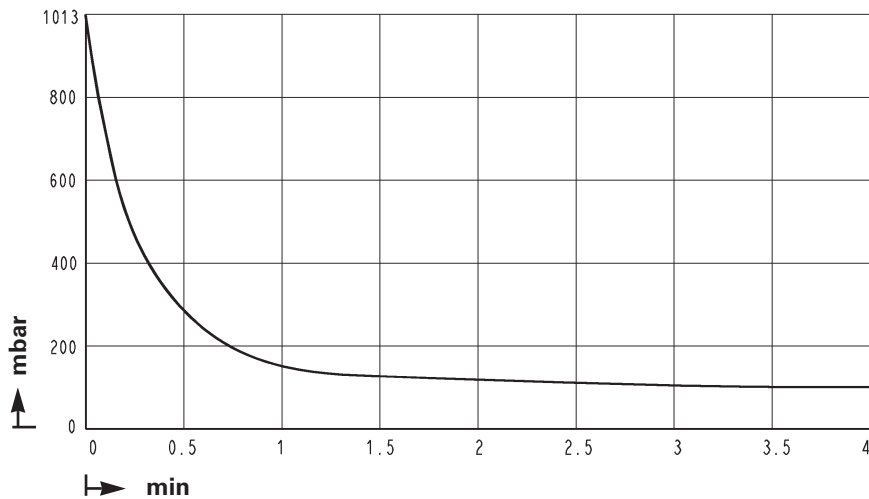
Dimensions ⁵⁾ (mm)



⁵⁾ All dimensional tolerances conform to DIN ISO 2768-1, Tolerance Class V



Pump down time 10 l receiver



MODEL CODE FOR EASY ORDERING

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

N 838	.1.2	KN	E	230 V/50 Hz, IP 20
• Base model	• Head connection in parallel	• Head material	• OEM version with ac motor	• Other motor data e.g.:

In addition the motor data must be given in the purchase order (voltage, frequency, and protection class).

Hints on function, installation, and service: see back side

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.

Accessories

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

KNF Neuberger GmbH Diaphragm Pumps + Systems

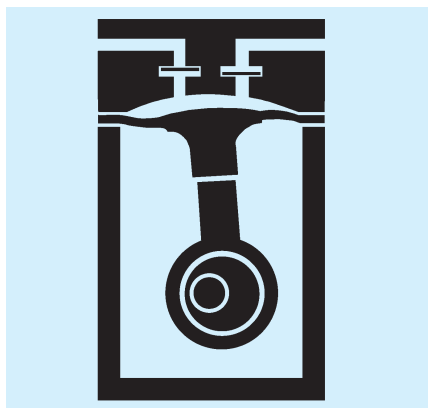
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HINTS ON FUNCTION, INSTALLATION AND SERVICE

FUNCTION OF KNF DIAPHRAGM VACUUM PUMPS AND COMPRESSORS

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



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 vapours
- Permissible ambient temperature: between +5°C and +40°C
- 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

- Components connected to the pump must be designed to withstand the pneumatic performance of the pump
- 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.

HINTS ON SERVICE

The diaphragm and valve plates are the only parts of the KNF diaphragm pumps subject to wear. They are easy to change, as no special tools are needed.

If you have any questions, please call our application engineers (see below for contact telephone number).