Diaphragm Pumps for Air, Gases and Vapours

INNOVATIVE
TECHNOLOGY
WORLDWIDE

KNF NEUBERGER

Mini Vacuum Pumps

Series
N 838 _DC and N 838 _E Pumps

TECHNICAL FEATURES:

- Uncontaminated flow
- No contamination of the media due to oil-free operation
- Compact size due to structured diaphragm
- Maintenance-free
- High performance because of structured diaphragm
- High level of gas tightness
- Long product life thanks to structured diaphragm
- Copes well with vapour and condensation
- Cool running motor even when in constant use
- Can operate in any installed position

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-optimized 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. The pumps can be driven by either AC or DC motors.

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. Mini Diaphragm Pumps for portable and stand-alone equipment require DC power supplies.

PERFORMANCE DATA

Type	Delivery (l/min)	Vacuum (mbar abs.)	atm. Press.	Pressure (bar g)	Weight (kg)
N 838 KNDC	32	100		0.5	2.2
N 838 ANDC	32	100		0.5	2.4
N 838 KNE	34	100		0.5	2.27
N 838 ANE	34	100		0.5	2.46

ACCESSORIES

Description	Order No.	Details
Silencer / Filter	007006	G 1/8
Hose connector	000360	G 1/8 / PA
Hose connector	014052	G 1/8 / PVDF

Diaphragm Pumps for Air, Gases and Vapours

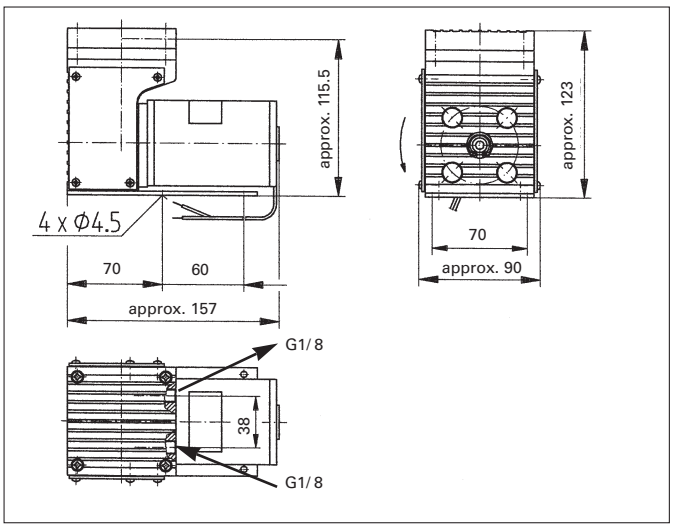
INNOVATIVE TECHNOLOGY WORLDWIDE

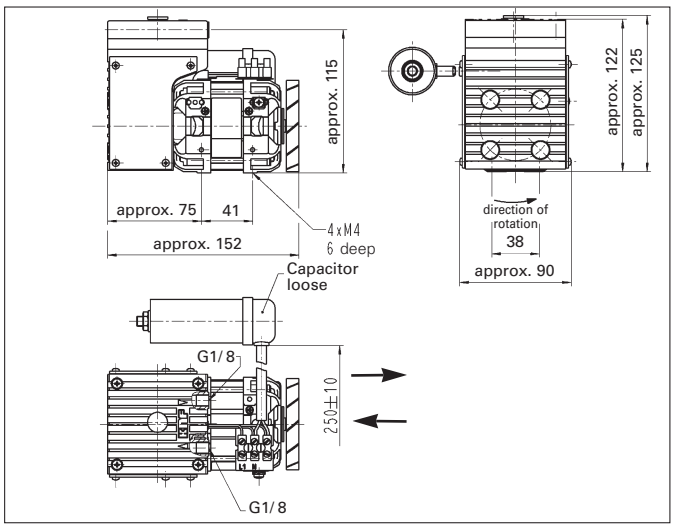
KNF NEUBERGER

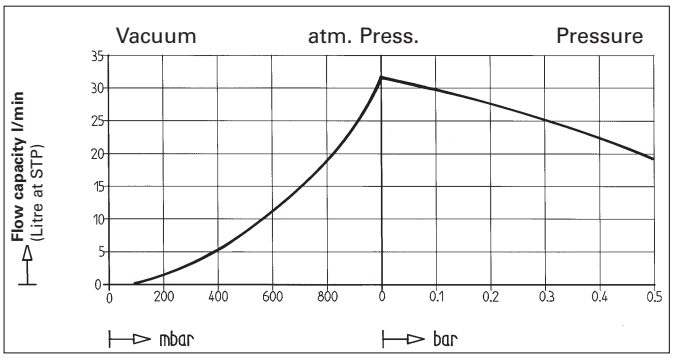
N 838 KNDC/ANDC

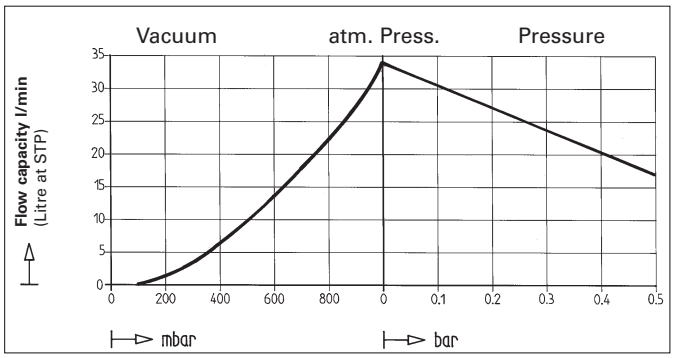
N 838 KNE/ANE

Dimensions in mm (All dimensional tolerances conform to DIN ISO 2768-1, Tolerance Class V)









PERFORMANCE DATA

Type and Order No.[2]	Delivery at atm. pressure (l/min)[1]	Max. operating pressure (bar g)[3]	Ultimate vacuum (mbar abs.)
N 838 KNDC	32	0.5	100
N 838 ANDC	32	0.5	100

[1] Litre at STP [3] Continuous running

PERFORMANCE DATA

Type and Order No.[2]	Delivery at atm. pressure (l/min)[1]	Max. operating pressure (bar g)[3]	Ultimate vacuum (mbar abs.)
N 838 KNE	34	0.5	100
N 838 ANE	34	0.5	100

[1] Litre at STP [3] Continuous running

MOTOR DAA

DC motor		**12 V**	**24 V**
Operating current (A)		3.7	1.9

MOTOR DATA

Protection class	**IP 00**		
Voltage/Frequencies (V/Hz)	230/50		
Power P_1 (W)	100		
Operating current (A)	0.6		

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

MODEL CODES AND MATERIALS

Type and Order No.[2]	Pump head	Diaphragm	Valves/sealing ring
N 838 KNDC	Ryton [4]	EPDM	Viton
N 838 ANDC	Aluminium	EPDM	Viton

MODEL CODES AND MATERIALS

Type and Order No.[2]	Pump head	Diaphragm	Valves/sealing ring
N 838 KNE	Ryton [4]	EPDM	Viton
N 838 ANE	Aluminium	EPDM	Viton

[2] See also „MODEL CODE FOR EASY ORDERING“ [4] Phillips Petroleum registered trade mark

Diaphragm Pumps for Air, Gases and Vapours

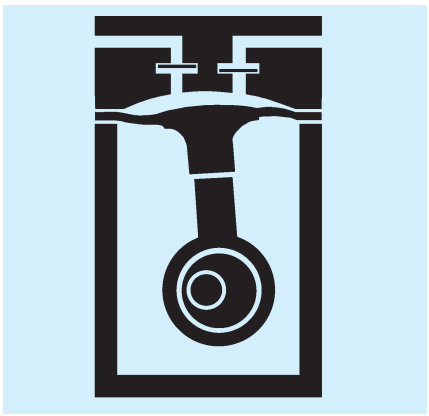
INNOVATIVE TECHNOLOGY WORLDWIDE KNF NEUBERGER

HINWEISE ZU FUNKTION, INSTALLATION UND 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.

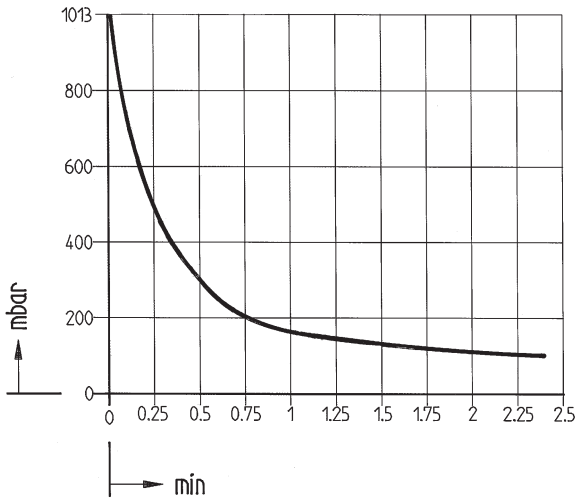
HINTS ON SERVICE

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).

PUMP DOWN TIME FOR 5 l RECEIVER

N 838 KNE/ANE



MODEL CODE FOR EASY ORDERING

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

N 838	KN	E DC	230 V/50 Hz, IP 00 or 12 V

- Base model
- Head materials
- Version with ac (E) or dc motor (DC)
- Other motor data eg.:

In addition the motor data must be given in the purchase order (voltage, frequency, and protection class). In our extensive program you are sure to find the pump you need for your particular application.

KNF 10/2004 Printed in Germany