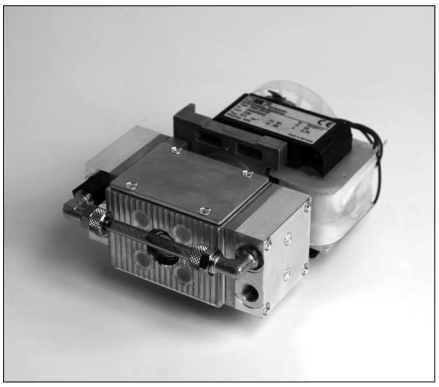
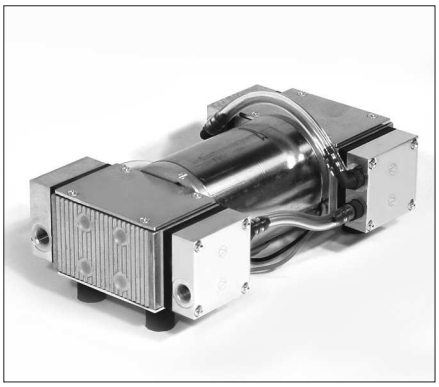
MINI DIAPHRAGM VACUUM PUMPS ROUGHING PUMPS

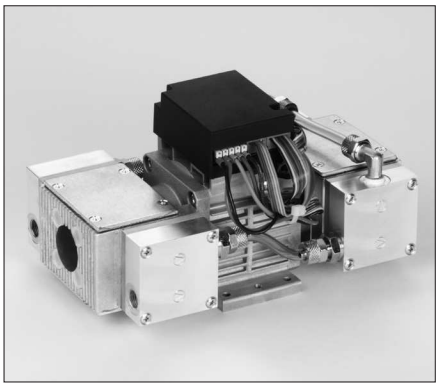
DATA SHEET E 006



N 84.3 ANE



N 84.4 ANDC



N 84.4 ANDC-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-optimized structured diaphragm, resulting in a high pneumatic performance, a durable product and compact size.

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.

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

Ready for assembly

Can operate in any installed position

Areas of use

The mini diaphragm 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, production technology or be used as roughing pump for turbomolecular pumps.

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

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 absolute)	atm. Pressure	Pressure (bar g)	Weight (kg)
N 84.3 ANE	4.2	7		0.3	1.4
N 84.3 ANDC	5	7		0.3	0.9
N 84.4 ANDC	4.8	2		0.3	1.6
N 84.4 ANDC-B	4.8	2		0.3	1.8
N 84.4 AN.29DC-B	4.8	2		0.3	1.8

N 84.3 ANE

Performance data

Type	Delivery at atm. pressure (l/min)[1]	Max. operating pressure (bar g)	Ultimate vacuum (mbar abs.)
N 84.3 ANE	4.2	0.3	7

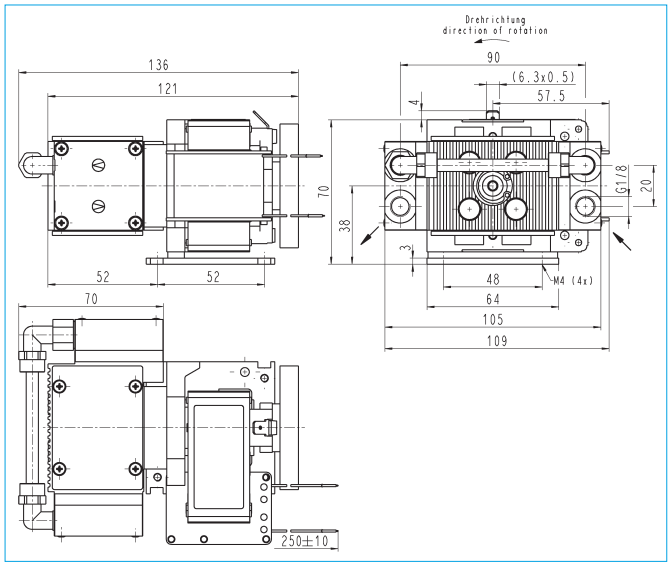
[1] Liter at STP

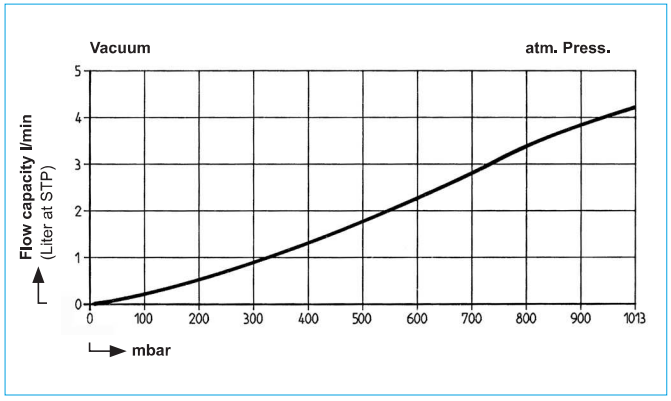
Motor data

Protection class	IP 00
Voltage/Frequencies (V/Hz)	230/50
Power P_1 (W)	65
I_{max} (A)	0.75

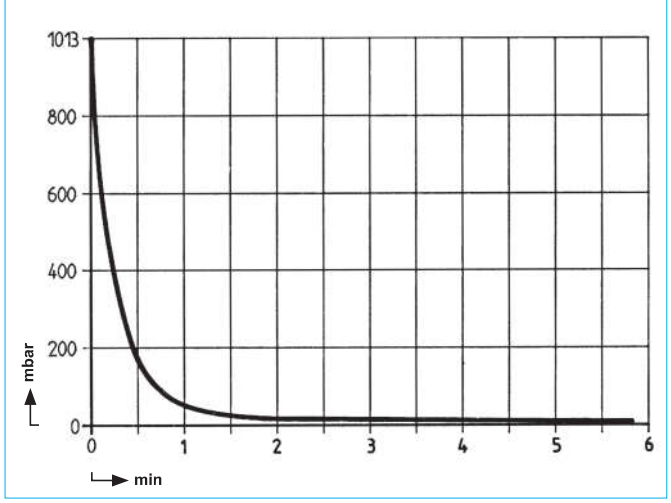
Pump material

Type	Pump head	Diaphragm	Valves
N 84.3 ANE	Aluminum	PTFE-coated	EPDM





Pump down time for 1 l receiver



N 84.3 ANDC

Performance data

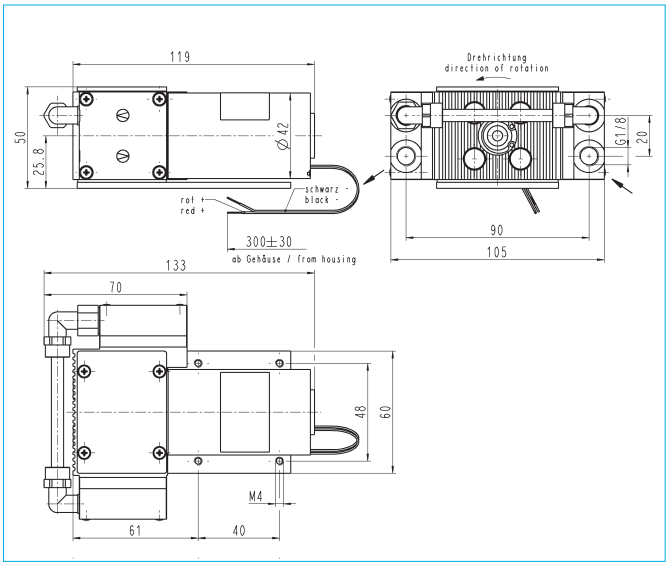
Type	Delivery at atm. pressure (l/min)[1]	Max. operating pressure (bar g)	Ultimate vacuum (mbar abs.)
N 84.3 ANDC	5	0.3	7

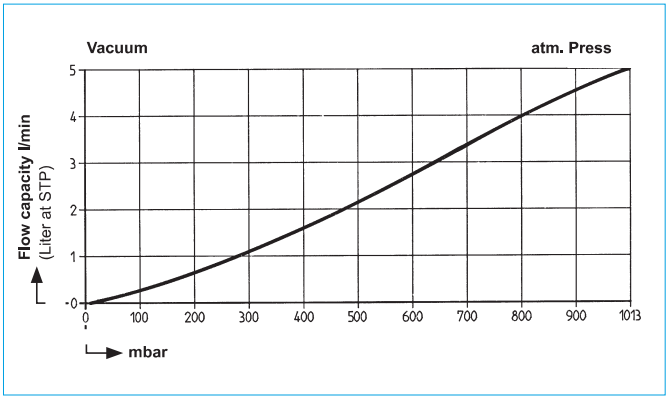
Motor data

Voltage	6 V	12 V	24 V
I_{max} (A)	3	1.5	0.75

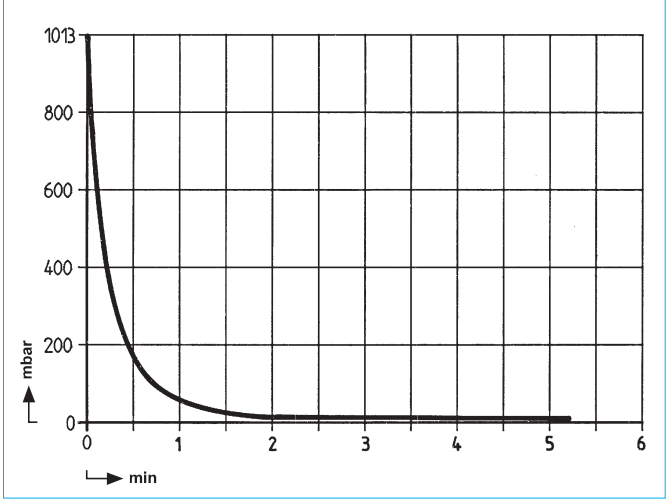
Pump material

Type	Pump head	Diaphragm	Valves
N 84.3 ANDC	Aluminum	PTFE-coated	EPDM





Pump down time for 1 l receiver



N 84.4 ANDC

Performance data

Type	Delivery at atm. pressure (l/min)[1]	Max. operating pressure (bar g)	Ultimate vacuum (mbar abs.)
N 84.4 ANDC	4.8	0.3	2

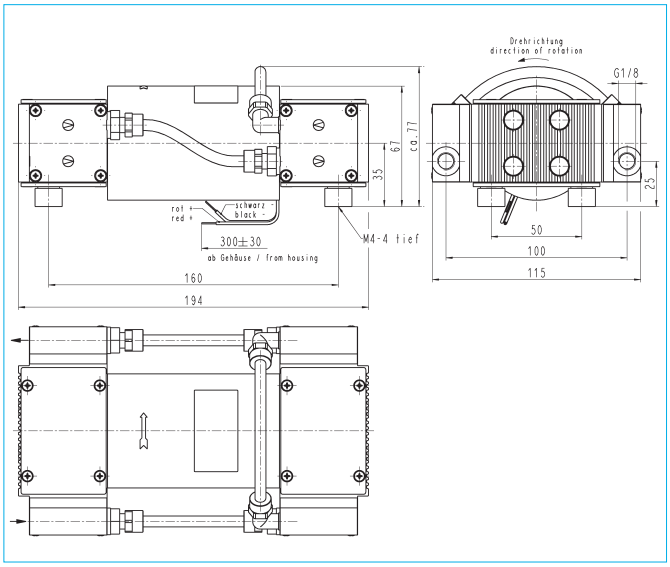
[1] Liter at STP

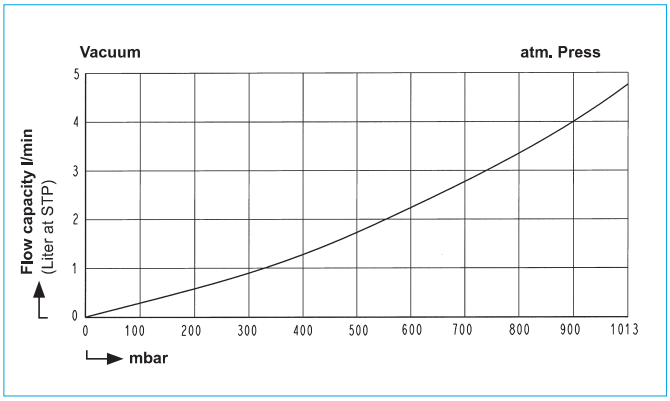
Motor data

Voltage	12 V	24 V
I_{max} (A)	1.3	0.85

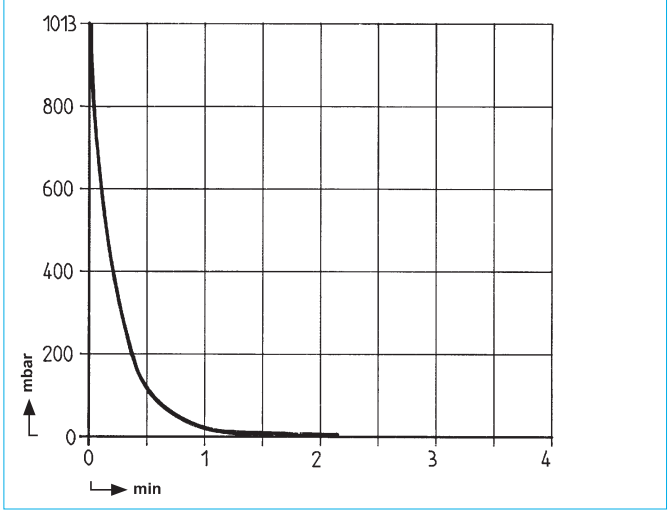
Pump material

Type	Pump head	Diaphragm	Valves
N 84.4 ANDC	Aluminum	PTFE-coated	EPDM





Pump down time for 1 l receiver



N 84.4 ANDC-B | AN.29DC-B

Performance data

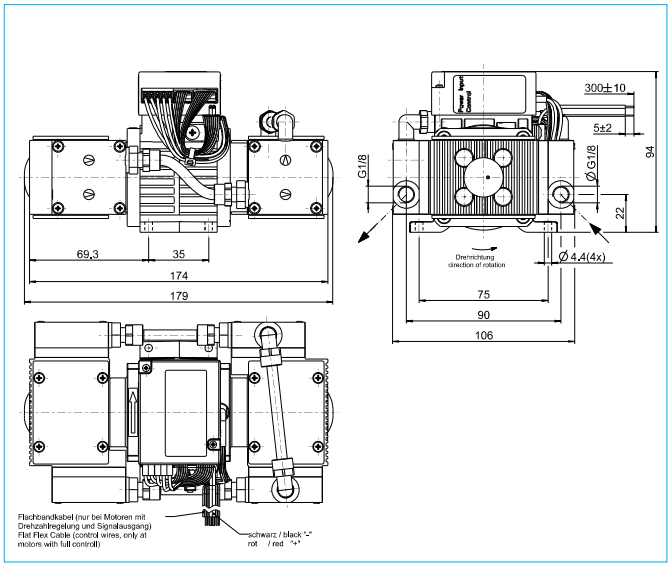
Type	Delivery at atm. pressure (l/min)[1]	Max. operating pressure (bar g)	Ultimate vacuum (mbar abs.)
N 84.4 ANDC-B	4.8	0.3	2
N 84.4 AN.29DC-B	1.0-4.8	0.3	up to 2

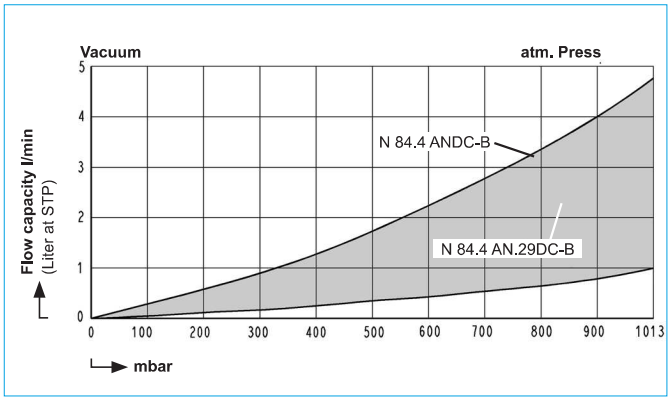
Motor data

Voltage	24 V
I_{max} (A)	1.2

Pump material

Type	Pump head	Diaphragm	Valves
N 84.4 ANDC-B	Aluminum	PTFE-coated	EPDM
N 84.4 AN.29DC-B	Aluminum	PTFE-coated	EPDM





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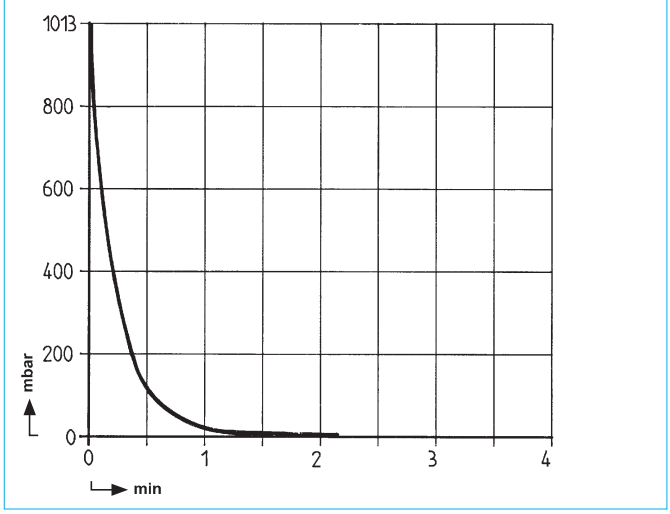
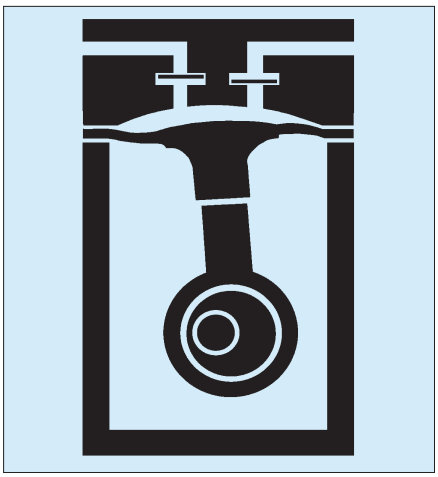


HINTS ON FUNCTION, INSTALLATION AND TECHNIQUE

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.



Hints on installation and operation

- Range of use: Transferring air and gases at temperatures between +5 °C and +40 °C
- Permissible ambient temperature: between +5 °C and +40 °C
- These pumps are not suitable for aggressive gases and vapors. In these cases there are other products in the KNF program - please ask us for details.
- 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.
- 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.

Technical details

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

Accessories		
Description	**Order No.**	**Details**
Silencer/Filter	000345	G 1/8
Hose connector	001936	G 1/8 / PA
Rubber foot	024435	2x (for N 84.3 ANE)

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