

DIAPHRAGM VACUUM PUMPS

DATA SHEET E 038



N 834.3 ANE

Concept

The 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, long product life 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 resistance. The customer has a choice of pump drives ranging from a selection of A/C motors to explosion-proof models. Please contact us for further details.

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

Starts against vacuum

Cool running motor even when in constant use

Ready for assembly

Can operate in any installed position

Areas of use

The 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

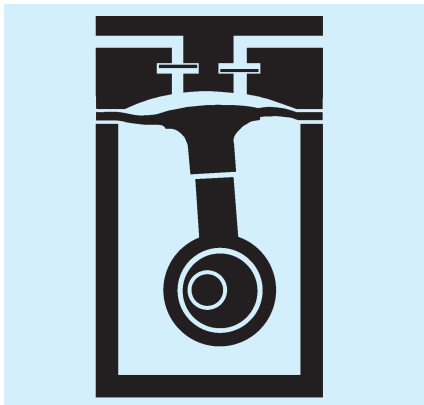
Type	Delivery (l/min)	Vacuum (mbar abs)	atm. Press.	Pressure (bar g)	Weight (kg)
N 834.3 ANE	33	10		1	11.0
N 834.3 ATE	33	10		1	11.0
N 834.3 FTE	33	10		1	11.0

HINTS ON FUNCTION, INSTALLATION, AND SERVICE

FUNCTION OF KNF DIAPHRAGM VACUUM 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.

Diaphragm pump



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
- 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 designed to start against vacuum. Pumps that start against pressure 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).

N 834.3 ANE N 834.3 ATE

N 834.3 FTE

Chemically resistant version

PERFORMANCE DATA

Type and Order No. ²⁾	Delivery at atm. pressure (l/min) ¹⁾	Max. operating pressure (bar g)	Ultimate vacuum (mbar abs.)
N 834.3 ANE	33	1	10
N 834.3 ATE	33	1	10

¹⁾ Litre at STP

MOTOR DATA

Protection class	IP 54		
Voltage/Frequencies (V/Hz)	~230/50		
Power P ₁ (W)	200		
Operating current (A)	2		

MODEL CODES AND MATERIALS

Type and Order No. ²⁾	Pump head	Diaphragm	Valves
N 834.3 ANE	Aluminium	EPDM	CR
For slightly aggressive or corrosive gases and vapours			
N 834.3 ATE	Aluminium	PTFE coated	FFPM

²⁾ See also „MODEL CODES FOR ORDERING“

PERFORMANCE DATA

Type and Order No. ²⁾	Delivery at atm. pressure (l/min) ¹⁾	Max. operating pressure (bar g)	Ultimate vacuum (mbar abs.)
N 834.3 FTE	33	1	10

¹⁾ Litre at STP

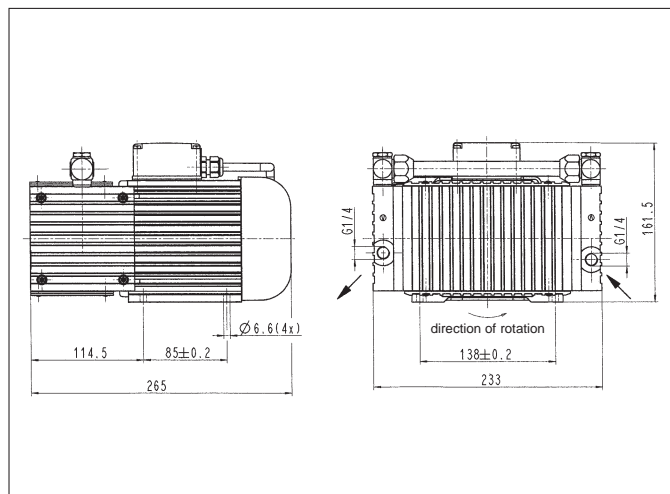
MOTOR DATA

Protection class	IP 54		
Voltage/Frequencies (V/Hz)	~230/50		
Power P ₁ (W)	200		
Operating current (A)	2		

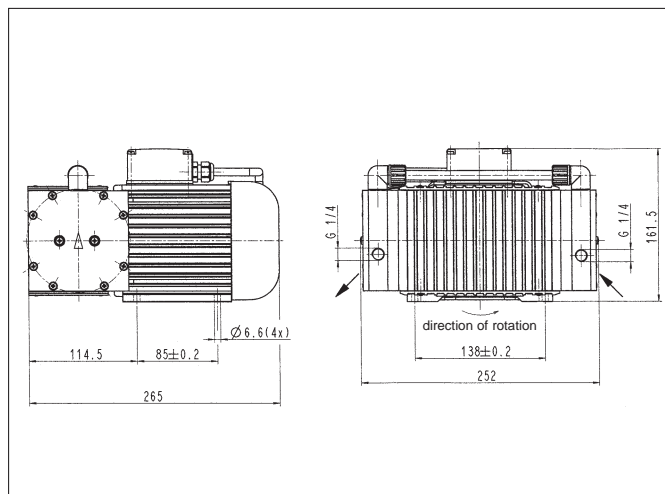
MODEL CODES AND MATERIALS

Type and Order No. ²⁾	Pump head	Diaphragm	Valves
N 834.3 FTE	PTFE	PTFE beschichtet	FFPM

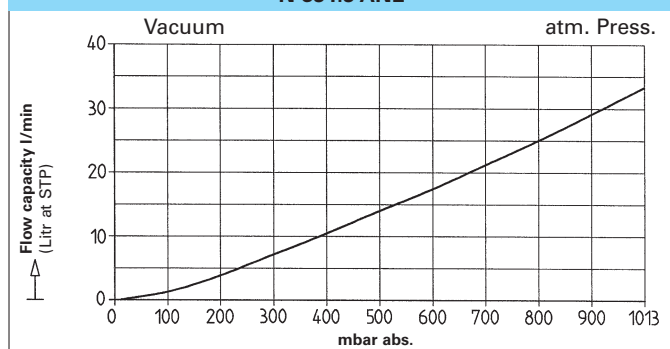
Dimensions ³⁾ (mm)



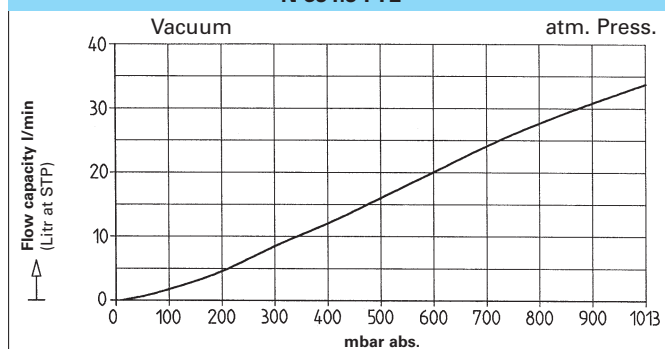
³⁾ All dimensional tolerances conform to DIN ISO 2768-1, Tolerance Class V



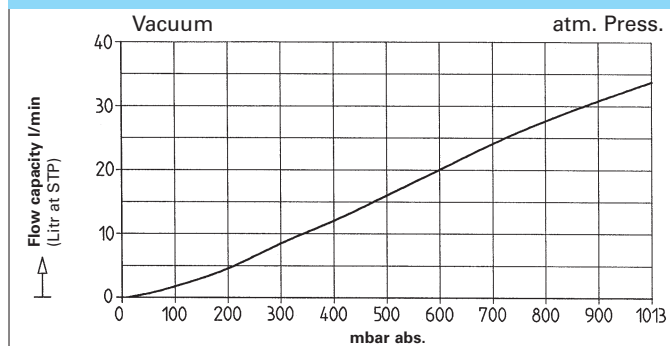
N 834.3 ANE



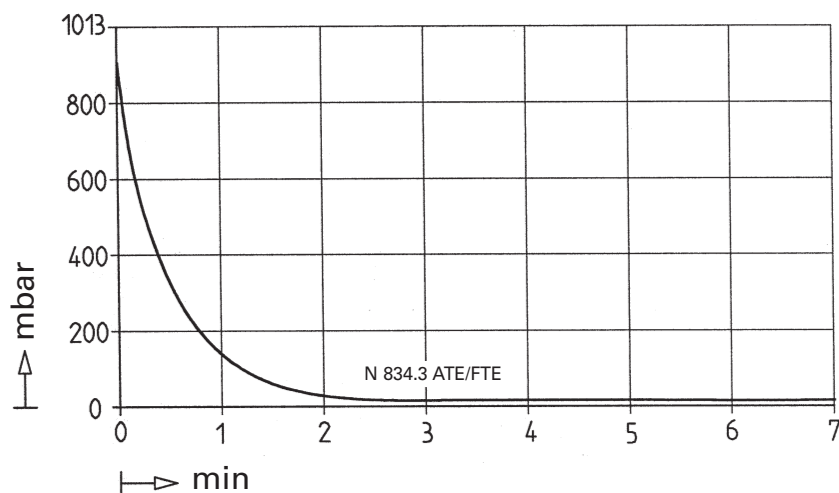
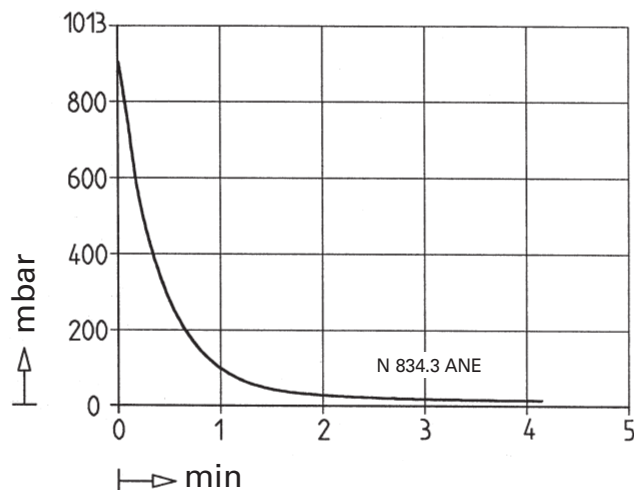
N 834.3 FTE



N 834.3 ATE



Pump down time for 10 l receiver



MODEL CODE FOR EASY ORDERING

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

N 834	.3	AN	E	230 V/50 Hz, IP 54
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- Base model
- Head connections
- Head materials
- Version with ac (E)
- Other motor data eg.

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

TECHNICAL DETAILS

Maximum permissible gas and ambient temperature: between +5°C and +40°C.

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

Accessories

Description	Order No.	Details
Silencer	007007	G 1/4
Hose connector	000362	G 1/4
Small flange	045858	G 1/4, DN 10
Gasket	029112	for G 1/4

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

KNF - the competent partner for vacuum and compressor technology. Especially for unusual problems. Call us and talk to our application engineers.

KNF Neuberger GmbH Diaphragm Pumps + Systems

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