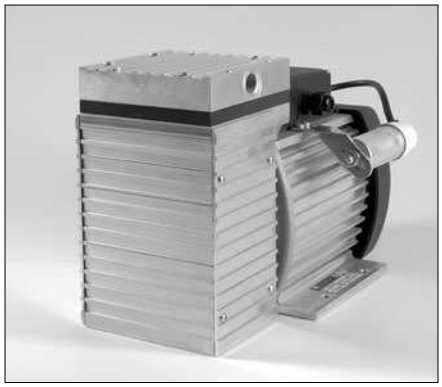
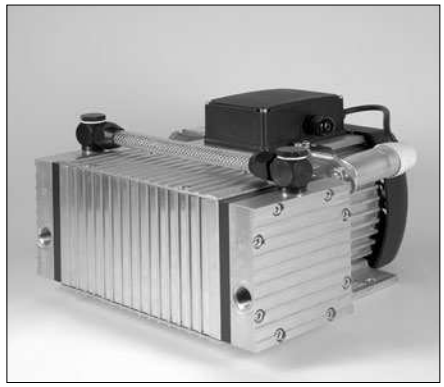
DIAPHRAGM VACUUM PUMPS

DATA SHEET E 040

N 860 FTE, chemically resistant



N 860 ANE



N 860.3 ANE

Concept

The diaphragm vacuum pumps from KNF are based on a simple principle – an elastic diaphragm, fixed on its edge, moves up and down its central point by means of an eccentric. In this way the substance is transferred using automatic valves.

The pumps are equipped with the patented stress-optimized structured diaphragm, resulting in a high pneumatic performance, long product life 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 resistance. The customer has a choice of pump drives ranging from a selection of AC motors to explosion-proof models.

Features

Uncontaminated flow
No contamination of the media due to oil-free operation

Maintenance-free

Compact size

High performance

High level of gas tightness

Chemically resistant versions

Long product life

Very quiet and little vibration

Copes well with vapor and condensation

Starts against vacuum

Cool running motor
even when in constant use

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 absolute)		Pressure (bar g)	Weight (kg)
N 860 ANE	60	80	atm. pressure	1	12.7
N 860 ATE	60	80		1	12.7
N 860 FTE	60	80		1	12.5
N 860.3 ANE	60	2		1	14.7
N 860.3 ATE	60	2		1	14.7
N 860.3 FTE	60	2		1	14.3

N 860 ANE | N 860 ATE

PERFORMANCE DATA

Type	Delivery at atm. pressure (l/min)[1]	Max. operating pressure (bar g)	Ultimate vacuum (mbar abs.)
N 860 ANE	60	1	80
N 860 ATE	60	1	80

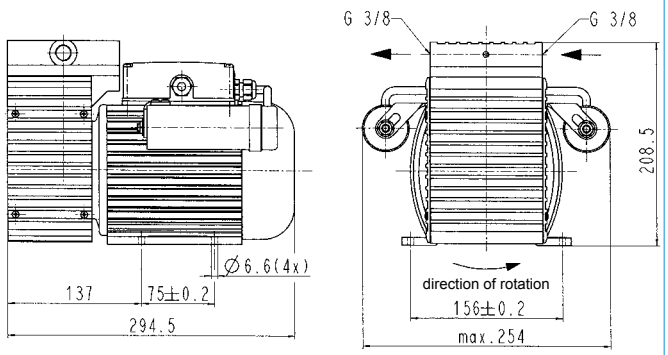
[1] Liter at STP

MOTOR DATA

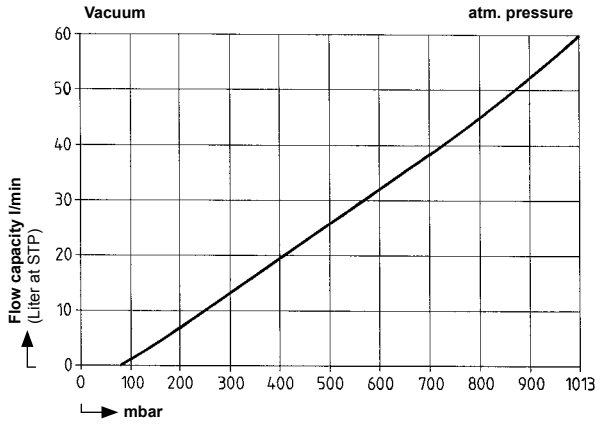
Protection class	IP 54
Voltage (V)	230
Frequencies (Hz)	50
Power P_1 (W)	200
I_{max} (A)	1.5

PUMP MATERIAL

Type	Pump head	Diaphragm	Valves
N 860 ANE	Aluminum	EPDM	EPDM
For slightly aggressive or corrosive gases and vapors			
N 860 ATE	Aluminum	PTFE-coated	FFPM



FLOW CAPACITY N 860 ANE I N 860 ATE



N 860 FTE

CHEMICALLY RESISTANT VERSION

PERFORMANCE DATA

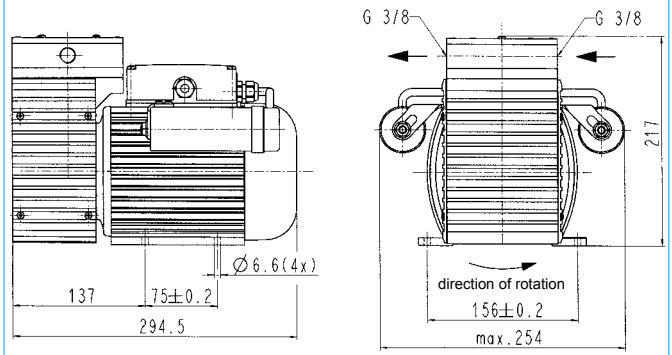
Type	Delivery at atm. pressure (l/min)[1]	Max. operating pressure (bar g)	Ultimate vacuum (mbar abs.)
N 860 FTE	60	1	80

MOTOR DATA

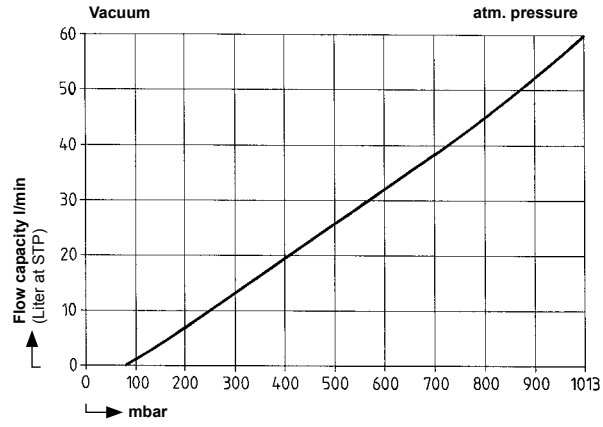
Protection class	IP 54
Voltage (V)	230
Frequencies (Hz)	50
Power P_1 (W)	200
I_{max} (A)	1.5

PUMP MATERIAL

Type	Pump head	Diaphragm	Valves
N 860 FTE	PTFE	PTFE-coated	FFPM



FLOW CAPACITY N 860 FTE



N 860.3 ANE | N 860.3 ATE

PERFORMANCE DATA

Type	Delivery at atm. pressure (l/min)[1]	Max. operating pressure (bar g)	Ultimate vacuum (mbar abs.)
N 860.3 ANE	60	1	2
N 860.3 ATE	60	1	2

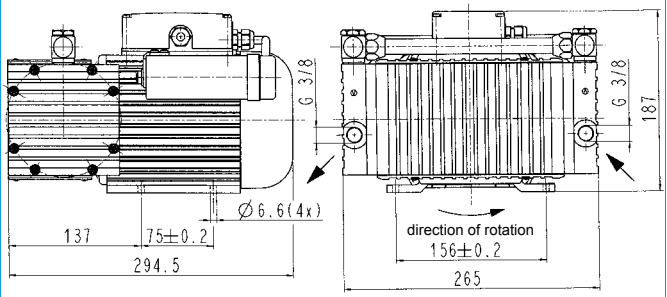
[1] Liter at STP

MOTOR DATA

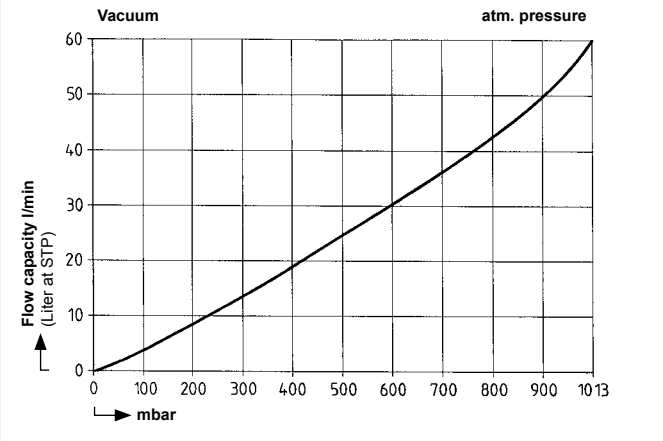
Protection class	IP 54
Voltage (V)	230
Frequencies (Hz)	50
Power P_1 (W)	220
I_{max} (A)	1.6

PUMP MATERIAL

Type	Pump head	Diaphragm	Valves
N 860.3 ANE	Aluminum	EPDM	EPDM
For slightly aggressive or corrosive gases and vapors			
N 860.3 ATE	Aluminum	PTFE-coated	FFPM



FLOW CAPACITY N 860.3 ANE I N 860.3 ATE



N 860.3 FTE

CHEMICALLY RESISTANT VERSION

PERFORMANCE DATA

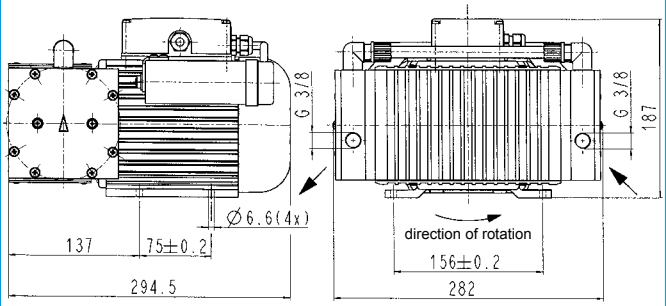
Type	Delivery at atm. pressure (l/min)[1]	Max. operating pressure (bar g)	Ultimate vacuum (mbar abs.)
N 860.3 FTE	60	1	2

MOTOR DATA

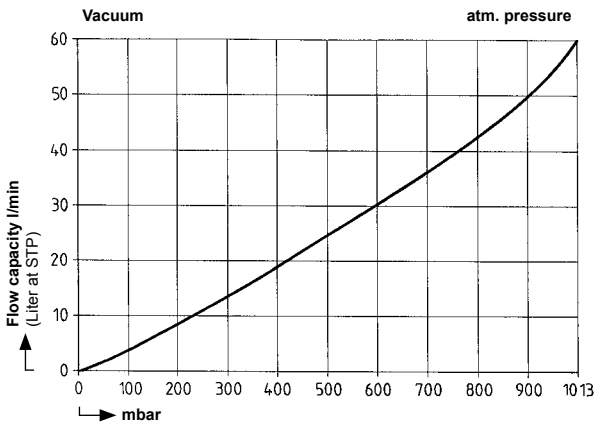
Protection class	IP 54
Voltage (V)	230
Frequencies (Hz)	50
Power P_1 (W)	220
I_{max} (A)	1.6

PUMP MATERIAL

Type	Pump head	Diaphragm	Valves
N 860.3 FTE	PTFE	PTFE-coated	FFPM



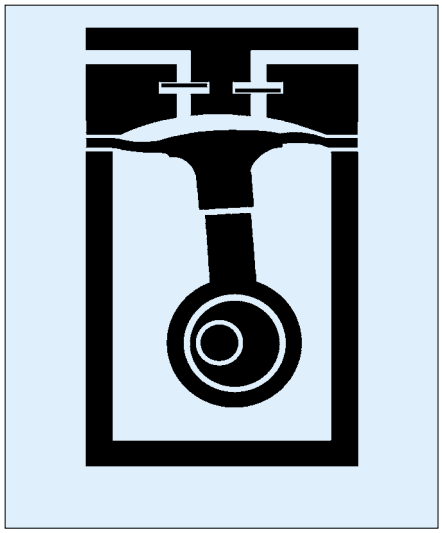
FLOW CAPACITY N 860.3 FTE



HINTS ON FUNCTION AND INSTALLATION

Function of KNF diaphragm vacuum pumps

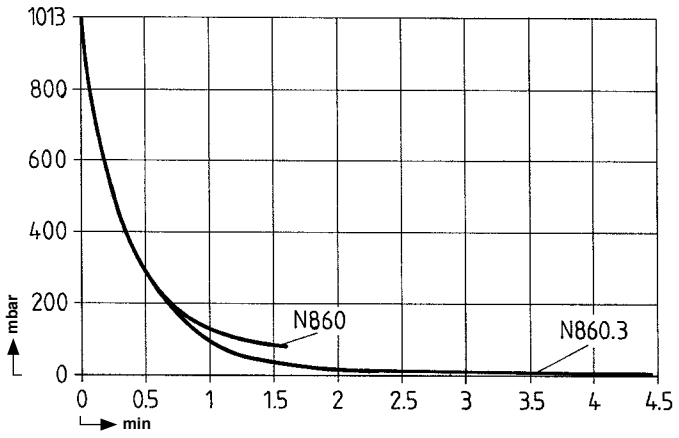
An elastic diaphragm is moved up and down by an eccentric (see illustration). On the down-stroke it draws the air or gas being handled through the inlet valve. On the up-stroke the diaphragm forces the medium through the exhaust valve and out of the head. The compression chamber is hermetically separated from the drive mechanism by the diaphragm. The pumps transfer, evacuate and compress completely oil-free.



Hints on installation and operation

- Range of use: Transferring air and gases at temperatures between +5 °C and +40 °C.
- Permissible ambient temperature: +5 °C ... +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.

PUMP DOWN TIME FOR 20 LITER VESSEL



ACCESSORIES

Description	Order No.	Details
Silencer	045993	G 3/8
Filter	046164	G 3/8
Hose connector	045859	G 3/8 / Ms
Hose connector	046851	G 3/8 / PVDF
Gasket	044982	

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KNF 03/2017 (Produced in Germany)

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