

DIAPHRAGM PUMPS FOR EXCELLENT SUCTION SPEED



N 950.50 KNDC-B – with brushless DC motor



N 950.50 KNE-W – with multi-voltage power supply input

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 medium is transferred using automatic valves.

The pumps are equipped with a parallel and series connection for the pump heads – resulting in a high pneumatic performance, a durable product and compact size. Special valves ensure that the product can cope easily with vapor and condensation.

A control cable (see accessories) can be used to change the motor speed and thereby the flow rate by varying the control voltage. This allows for example the flow rate to be adapted to the process requirements.

The vacuum pumps are optionally available with a gas ballast valve.

Features

Transferring and evacuation of air and gases

No contamination of the media due to oil-free operation

High level of gas tightness

Quiet running

Cool and efficient brushless motor

Optional with gas ballast valve (Ultimate vacuum down to 4 mbar abs.) and signal input for external control (motor speed)

Multi-voltage power supply input (N 950.50 KNE-W)

Can operate in any installed position

Areas of use

The N 950.50 series of diaphragm vacuum pumps offer a high level of performance in a compact unit size. The pumps are used for transferring gases, taking samples (even liquids in a vacuum), evacuating vessels and systems.

The N 950.50 vacuum pumps are used for example in the semiconductor and pharmaceutical industries, in chemical engineering, analytical instruments, in surface finishing, equipment for seal testing or in various procedures and processes carried out under vacuum conditions.

PERFORMANCE DATA

Type	Delivery (l/min)	Vacuum (mbar absolute)	atm. press.	Pressure (bar g)	Weight (kg)
N 950.50 KNDC-B	55	2		0.5	6.5
N 950.50 KNE-W	55	2		0.5	7.4

N 950.50 KNDC-B

PERFORMANCE DATA

Type	Delivery at atm. pressure (l/min) ¹⁾	Max. operating pressure (bar g)	Ultimate vacuum (mbar abs.)
N 950.50 KNDC-B	55	0.5	2

¹⁾ Liter at STP

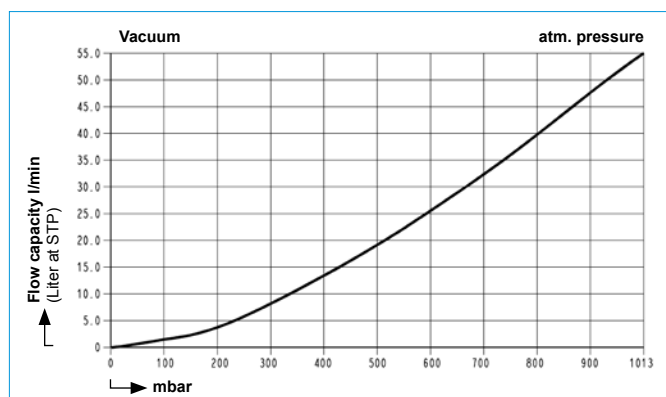
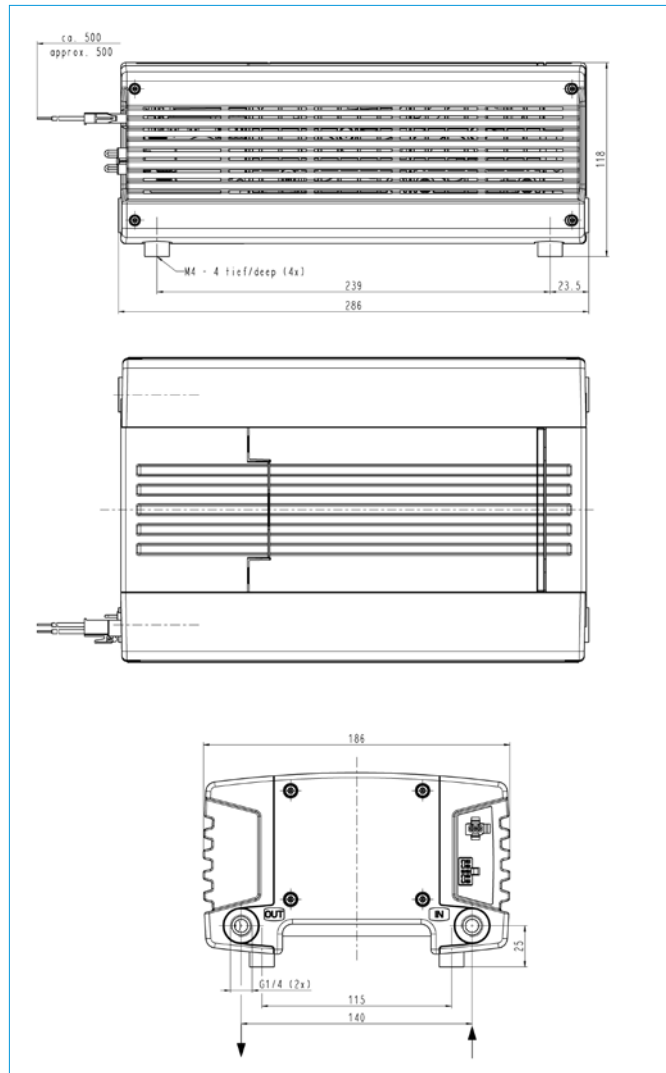
MOTOR DATA

Motor type: brushless DC motor	
Protection class	IP 20
Voltage (V)	24
Power P ₁ (W)	120
I _{max} (A)	5

PUMP MATERIAL

Type	Pump head	Diaphragm	Valves
N 950.50 KNDC-B	PPS	PTFE-coated	FPM

Optional with gas ballast valve (ultimate pressure down to 4 mbar abs.) and signal input for external control (motor speed).



N 950.50 KNE-W

PERFORMANCE DATA

Type	Delivery at atm. pressure (l/min) ¹⁾	Max. operating pressure (bar g)	Ultimate vacuum (mbar abs.)
N 950.50 KNE-W	55	0.5	2

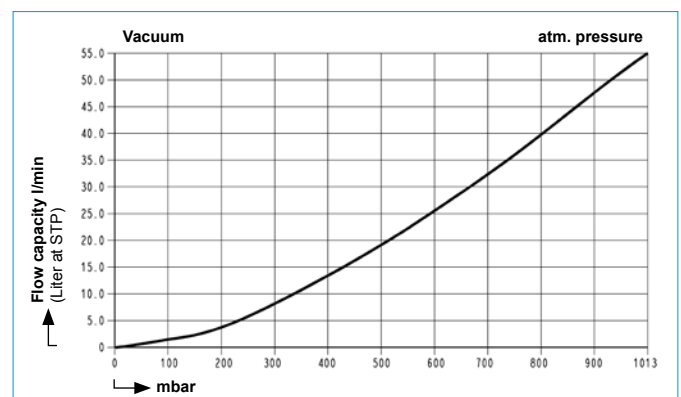
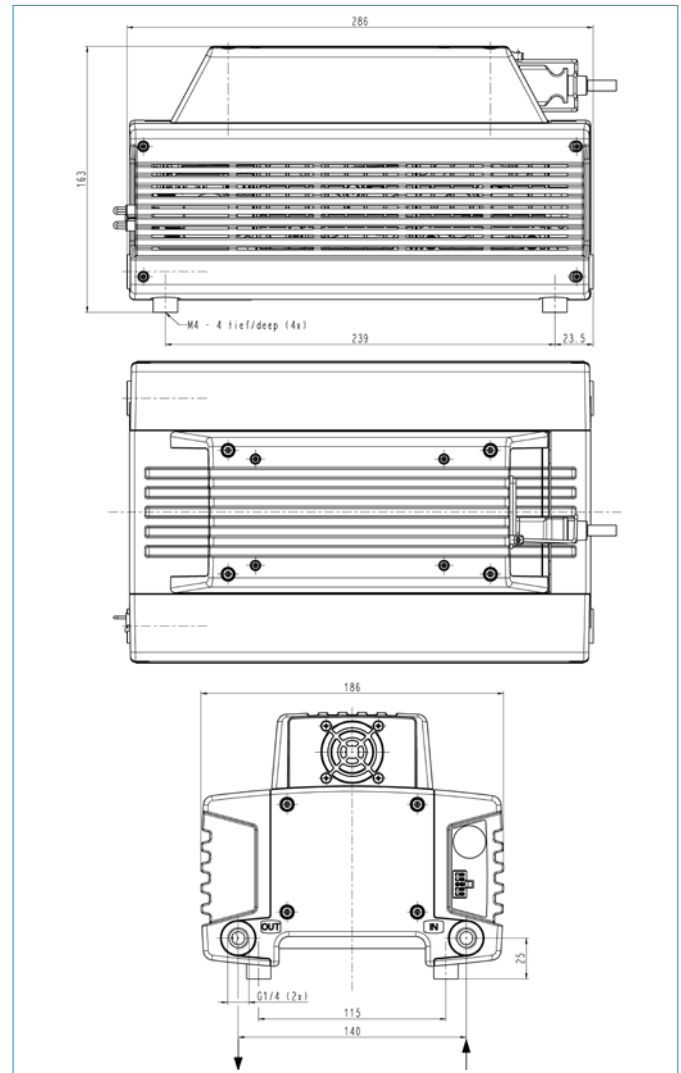
MOTOR DATA

Motor type: brushless DC motor with AC power supply	
Protection class	IP 20
Voltage (V)	100-240
Frequencies (Hz)	50-60
Power P ₁ (W)	140
I _{max} (A)	1.9

PUMP MATERIAL

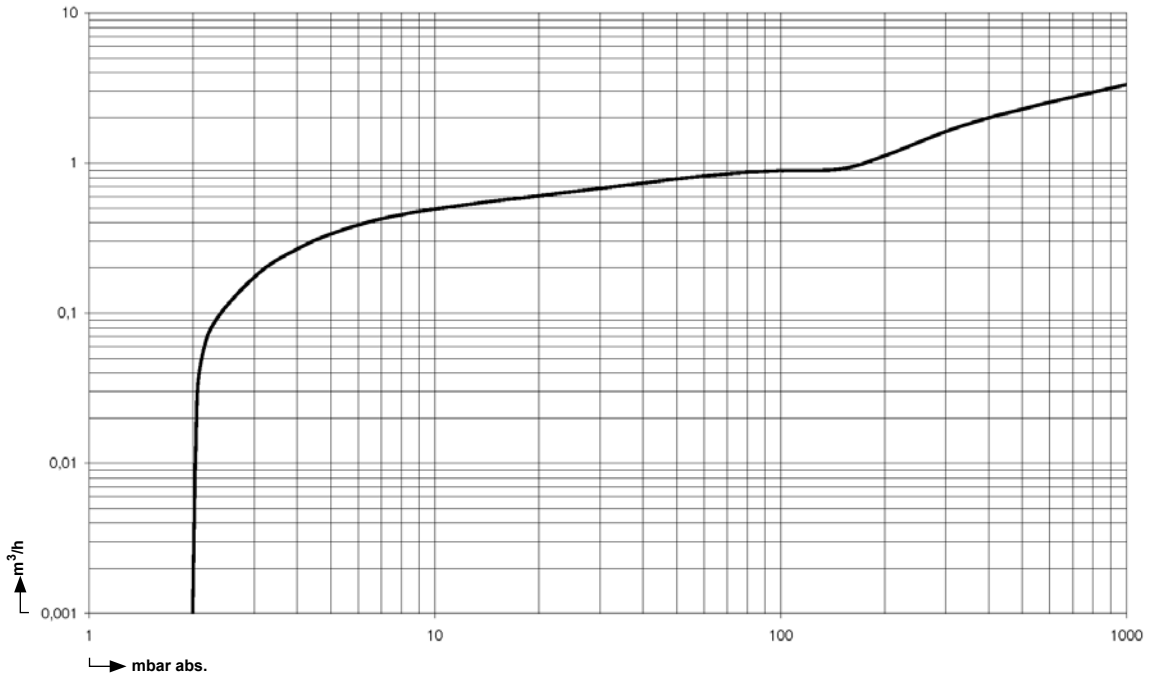
Type	Pump head	Diaphragm	Valves
N 950.50 KNE-W	PPS	PTFE-coated	FPM

Optional with gas ballast valve (ultimate pressure down to 4 mbar abs.) and signal input for external control (motor speed).

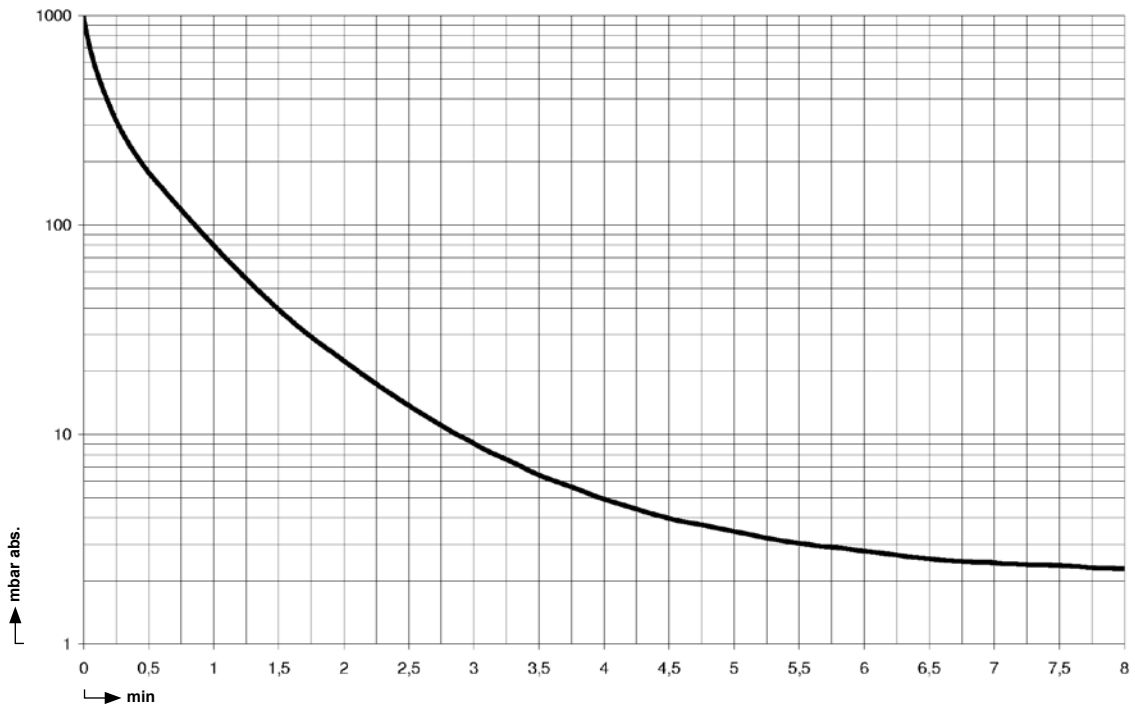


TECHNICAL INFORMATION

SUCTION PUMPING SPEED (1.500 1/MIN)



PUMP DOWN TIME FOR 10 LITER VESSEL



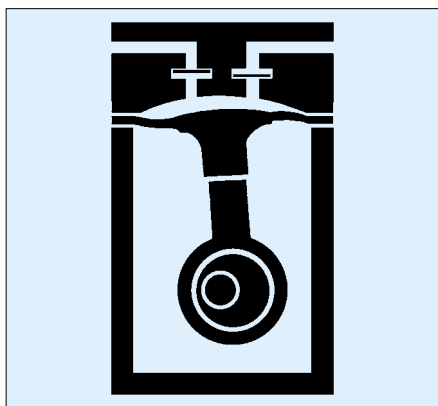
ACCESSORIES

Description	Order No.	Details
Spare parts kit	125411	Diaphragm, valves, sealing ring
Control cable	125391	0.5 m long
Gas ballast valve	-	on request
Hose connector	004950	G 1/4, for tube ID 9
Sealing for hose connector	029112	G 1/4
Small flange, stainless steel	048116	G 1/4, KF 16

HINTS ON FUNCTION AND INSTALLATION

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: +10 °C ... +40 °C.
- Please check the compatibility of the materials of the pump head, diaphragm and valves with the medium.
- The KNF product line contains pumps suitable for pumping aggressive gases and vapors – please contact us.
- 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.

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