

MICRO DIAPHRAGM LIQUID PUMP NF1.5

SECTION 200.14

NF1.5KPDC-M



Concept

KNF micro diaphragm liquid pumps are based on the principle of the oscillating displacement pump which is remarkably simple in design. The circular power from the motor is converted into vertical movement by an eccentric. This motion is then transferred to a diaphragm by means of a connecting rod which, in conjunction with an inlet and outlet valve, creates a pumping action.

The NF 1.5 liquid pump can be mounted in any position. It delivers up to 60 ml/min and will operate against pressures of up to 87 PSIG*

NF1.5KPDCB-4



Features

Small and powerful

Micro design and maximum performance resulting from built-in technology are the outstanding characteristics of these products.

Self-priming

Sophisticated diaphragm technology and precise valve structures enable performances of 8.86 in.Hg suction or 87 PSIG pressure.

Extreme chemical resistance

The use of the materials PTFE, (TFM) PVDF, EPDM for the parts which come in contact with the liquid allows many neutral or corrosive liquid to be pumped.

Dry running, durable and maintenance free

The carefully considered design of these pumps allows them to be run dry and ensures safe operation and a long life even under the most severe conditions.

NF1.5TTDCB-4



Areas of use

The versatility of KNF pumps allows a wide field of applications to be covered. Over many years our pumps have proved themselves in the following areas:

Analysers

- Medical / pharmaceutical
- Environmental / water treatment
- Food / toxicology

Laboratory

- Filtration
- Chromatography

Cleaning industry





- Cuvette cleaning
- Sterilizers
- Industrial washing machines

Printing

- Ink jet printing
- Photographic / film development

Other applications for micro-diaphragm liquid pumps include: fuel cells, hydrogen generators, CD coating, dental technology, textiles and many more.

*The pressure range can be extended up to 145 PSIG on request.

Performance			
Type	Flow rate (ml/min)	max. Suction head (in.Hg)	max. Pressure head (PSIG)
NF1.5DC-M	 60	8.86	 87/145*
NF1.5DCB-4	 5-50	8.86	 87/145*

The KNF Modular Concept of Selection

General note

This Data Sheet provides an overview of the options with our NF1.5 pumps. Certain standard options will be explained in more detail where necessary.

Flow curves

The flow curves illustrate how the flow rate alters in relation to the pressures before and after the pump. In the case of a combination of both we would be very happy to advise what the expected flow rate would be.

The values given in the curves are dependant upon the liquid, choice of head materials and the type of hoses being used. Therefore a certain deviation is to be expected.

Note: The flow rate is measured with water at 20°C.

1 Materials of head components

KNF offers a wide range of different materials for those parts which come in contact with the liquid thus allowing the possibility of pumping most liquids.

2 Motors

DC-M Direct current motor

DCB-4 Brushless direct current motor

This type of motor has no brushes which can wear down thus giving it a lifetime comparable with an AC motor.

The small size, the flow rate adjustability and the impulse generator are some more advantages to the other DC motors.

Leads

Function	Leads color	Signal name	Signal
+ Voltage	red	+Vs	10 to 28V DC
- Voltage	black	-Vs/GND	-
Speed control input signal	white	Vctrl	0.3 to 5V DC
Impulse generator	green	FG	6 Pulse / mech. rotation

3 Voltages

Choose from the different electrical connection possibilities. Special variations are available.

Modules

Our versatile self-selection program allows you to personally determine the optimum characteristics that you require from your pump. Select your diaphragm pump from the following characteristics:

Type description			
Type	Components		
	1	2	3
NF1.5			

1	Materials of head components	
KP	Head Valves Dipahragm	PP EPDM PTFE covered
KT	Head Valves Dipahragm	PP FFPM PTFE covered
TT	Head Valves Dipahragm	PVDF FFPM PTFE covered

2	Motors
DC-M	Direct current motor
DCB-4	Brushless direct current motor

3	Voltages
12 / 24V	for direct current motor
10 to 28V	for brushless direct current motor

