DIAPHRAGM LIQUID PUMPS

NF 5

NF 5 RP.51 DC-M

NF 5 RPDC-L

NF 5 RPDCB-4

Concept

KNF 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 5 liquid pump can be mounted in any position. It delivers up to 60 ml/min and will operate against pressures of up to 10mWg.

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 3.5 mWg suction or 10mWg pressure.

Extreme chemical resistance
The use of the materials PPS and 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 run dry and ensures safe operation and a long life even under the most severe conditions.

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
- Sterilisers
- Industrial washing machines

Printing
- Ink jet printing
- Photographic / film development

Other applications for diaphragm liquid pumps include: fuel cells, hydrogen generators, semiconductor industry, textiles and many more.

PERFORMANCE DATA			
Type	**Flow rate (ml/min)**	**Suction height (mWg)**	**Pressure head (mWg)**
NF 5 DC M	**50**	**3.5**	**10**
NF 5 DC L	**50**	**3.5**	**10**
NF 5 DC B	**5-60**	**3.5**	**10**

THE KNF MODULAR CONCEPT OF SELECTION

General note
This data sheet provides an overview of the options with our NF 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 Flodos 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
- **DC-L** Ironless direct current motor
  This provides the following advantages compared to a conventional DC motor: higher durability, less power consumption and smaller size.
- **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.

3 Voltages and frequencies
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:

PUMP TYPE			
Basic model	**Components**		
	1	**2**	**3**
e.g. NF 5	**RT**	**DC-L**	**12V**

1 MATERIALS OF HEAD COMPONENTS		
RP / RP .51*	Head Valves Diaphragm	PPS EPDM EPDM
RT	Head Valves Diaphragm	PPS FFKM FFKM

* food conform according to the standard NSF/ANSI 169, for further information see options

2 MOTORS	
DC M	Direct current motor
DC L	Ironless direct current motor
DCB 4	Brushless direct current motor

3 VOLTAGE	
12V	for direct current motor
10..28V	for brushless direct current motor

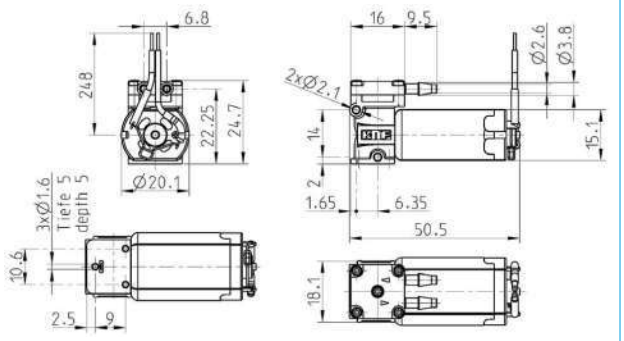
NF 5 DC-M / L

PERFORMANCE DATA

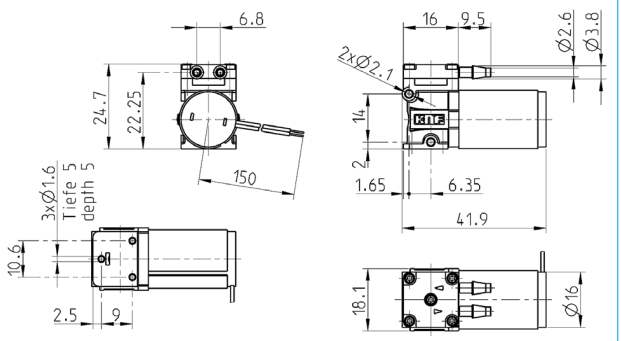
Type	Flow rate at atmos. pressure (ml/min)	Max. suction height (mWg)	Max. pressure head (mWg)
NF 5 DC-M	**50**	**3.5**	**10**
NF 5 DC-L	**50**	**3.5**	**10**

Type	DC-M	DC-L
Voltage (V)	12	12
Power rating (W)	0.96	0.65
I max. load. (A)	0.08	0.054
I max. (A)	0.121	0.092
EMV guideline	EN 55014	EN 55011
Motor protection factor	IP 30	IP 30
Weight (g)	42	36

NF 5 DC-M-VERSION



NF 5 DC-L-VERSION



NF 5 DC-M-VERSION