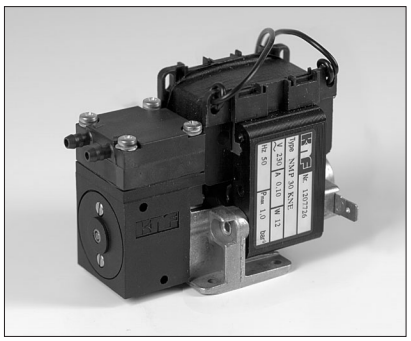
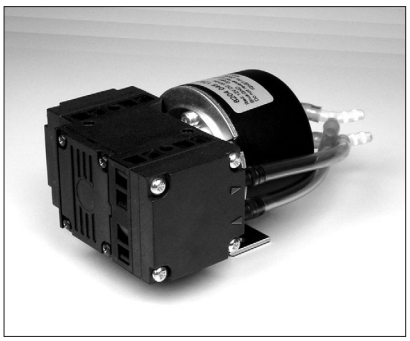
MICRO DIAPHRAGM GAS PUMPS NMP 830, NMP 850 and NMP 850.1.2



NMP 830 KNE (AC Motor)

NMP 830 KNDC B BLDC Motor



NMP 850.1.2 KNDC B BLDC Motor

Concept

The micro-diaphragm gas 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 gas is transferred using automatic valves.

The new range of KNF micro pumps is for the first time equipped with the stress-optimized diaphragm, resulting in a high pneumatic performance, a durable product and compact size. In addition special valves ensure the minimum resistance to flow.

Thanks to the KNF modular system, the parts used to tranfer the gases can be made from materials with varying degrees of compatability. The pumps can be driven by either AC motor, DC motors or brushless DC motor for long durability.

Features

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

Maintenance-free

Compact size

High pneumatic performance

High level of gas tightness
thanks to the closed diaphragm surface and special sealing system

Low aerodynamic loss
by means of a new valve system

Long product life

Ready for assembly

Can operate in any installed position

For the version with brushless motor the following also apply:
- safe and reliable constant use
- particularly long durability

Areas of use

KNF micro-diaphragm pumps are used frequently in the fields of analysis and medicine.

They are used as pumps for gas measurement, for example, for sampling environmental conditions in the workplace, or for exhaust gas and smoke analysis, or built into machines for measuring blood pressure.

The AC models are suited for use in machinery which is permanent or mains-operated. Micro-diaphragm pumps for portable and stand-alone equipment require DC power supplies.

PERFORMANCE DATA

Type	Delivery (l/min)	Vacuum (mbar absolute)	atm. Press.	Pressure (bar g)	Weight (g)
NMP 830 KNE	1.8	250		1	590
NMP 830 KNDC B	2.5	240		1.4	270
NMP 830 KNDC	3.1	250		1	195
NMP 850 KNDC B	4.2	230		1.5	360
NMP 850 KNDC	4.5	230		1.5	210
NMP 850.1.2 KNDC B	8.0	230		1.5	430

NMP 830 AC Motor

PERFORMANCE DATA

Type and Order No. [3]	Delivery at atm. pressure (l/min) [1]	Max. operating pressure (bar g) [2]	Ultimate vacuum (mbar abs.)
NMP 830 KNE	1.8	1	250
NMP 830 KVE	1.8	1	250
NMP 830 KTE	1.6	1	310

[1] Litre at STP [2] Continuous running

MOTOR DATA

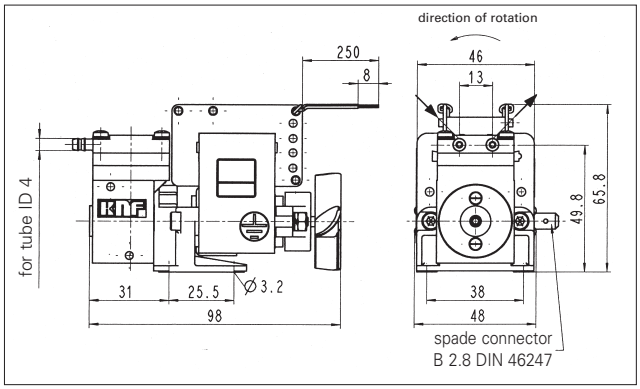
Protection class	**IP 00**	**IP 00**	
Voltage/Frequencies (V/Hz)	230/50	115/60	
Power P_1 (W)	25	~25	
Operating current (A)	0.3	~0.6	

MODEL CODES AND MATERIALS

Type and Order No. [3]	**Pump head**	**Diaphragm**	**Valves**
NMP 830 KNE	Ryton [4] (PPS)	EPDM	Neoprene (CR)
NMP 830 KVE	Ryton [4] (PPS)	Viton (FPM)	Viton (FPM)
Chemically resistant version			
NMP 830 KTE	Ryton [4] (PPS)	PTFE coated	FFPM

[3] See also „MODEL CODES FOR EASY ORDERING“

Dimensions [5] (mm)



NMP 830 DC Motor

PERFORMANCE DATA

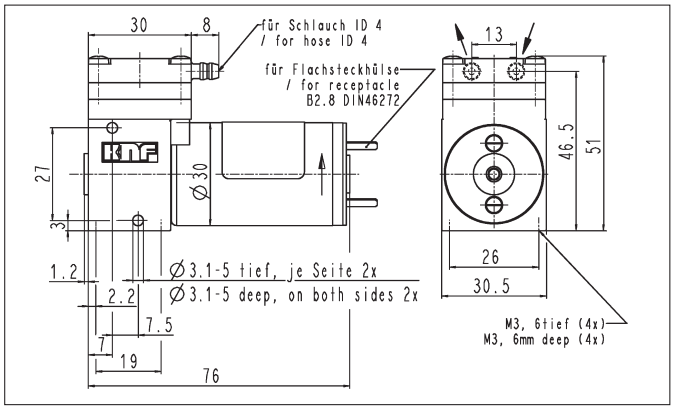
Type and Order No. [3]	Brush-type DC motor (V)	Delivery at atm. pressure (l/min) [1]	Max. Operating pressure (bar g) [2]	Ultimate vacuum (mbar abs.)
NMP 830 KNDC	6	3.1	1	250
NMP 830 KVDC	6	2.7	1	250
NMP 830 KTDC	6	2.6	1	350
NMP 830 KNDC	12	3.1	1	250
NMP 830 KVDC	12	2.7	1	250
NMP 830 KTDC	12	2.6	1	350
NMP 830 KNDC	24	3.1	1	250
NMP 830 KVDC	24	2.7	1	250
NMP 830 KTDC	24	2.6	1	350

[1] Litre at STP [2] Continuous running

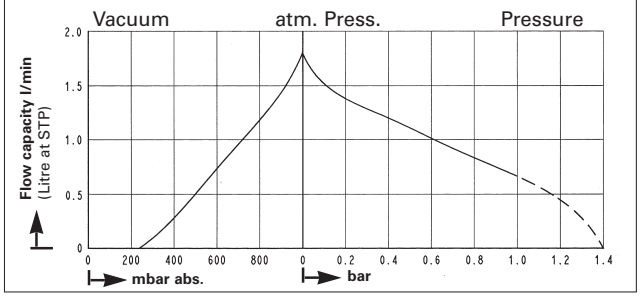
MODEL CODES AND MATERIALS

Type and Order No. [3]	**Pump head**	**Diaphragm**	**Valves**
NMP 830 KNDC	Ryton [4] (PPS)	EPDM	Neoprene (CR)
NMP 830 KVDC	Ryton [4] (PPS)	Viton (FPM)	Viton (FPM)
Chemically resistant version			
NMP 830 KTDC	Ryton [4] (PPS)	PTFE coated	FFPM

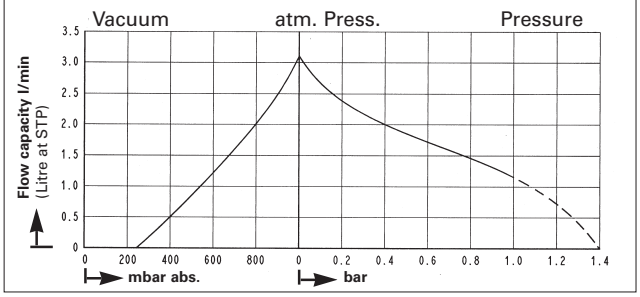
[4] Phillips Petroleum registered trade mark



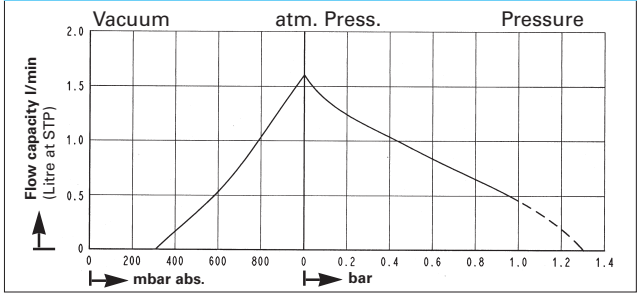
NMP 830 KNE/NMP 830 KVE



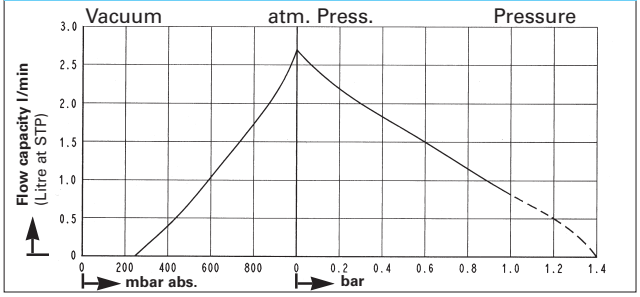
NMP 830 KNDC



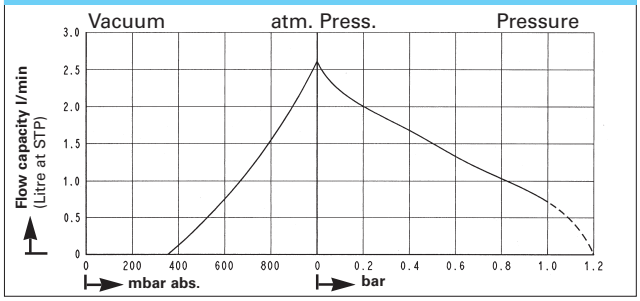
NMP 830 KTE



NMP 830 KVDC



NMP 830 KTDC



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Web: http://www.knf.com

- - - - - - - for short periods only

[5] All dimensional tolerances conform to DIN ISO 2768-1, Tolerance Class V

NMP830 BLDC Motor

PERFORMANCE DATA

Type and Order No. [3]	Brushless DC motor (V)	Delivery at atm. pressure (l/min) [1]	Max. operating pressure (bar g) [2]	Ultimate vacuum (mbar abs.)
NMP 830 KNDC B	12	2.5	1.4	240
NMP 830 KVDC B	12	2.1	1.4	240
NMP 830 KTDC B	12	2.1	1.3	330
NMP 830 KNDC B	24	2.5	1.4	240
NMP 830 KVDC B	24	2.1	1.4	240
NMP 830 KTDC B	24	2.1	1.3	330

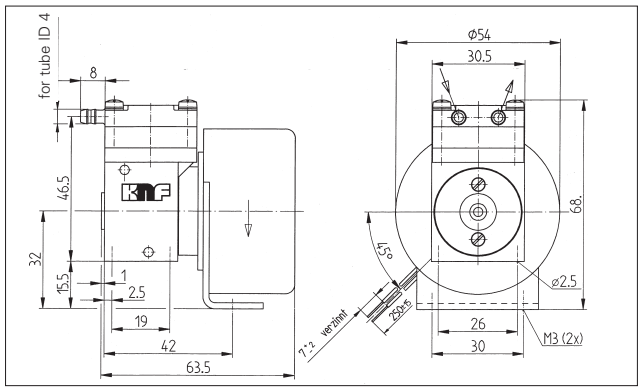
[1] Litre at STP [2] Continuous running

To comply with CE standards (EMC guidelines to EN 55014-1),see the specifications in the operating instruction.

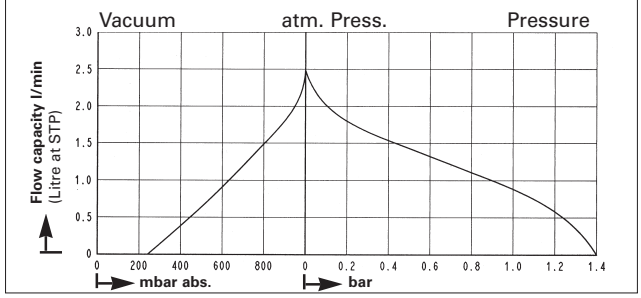
MODEL CODES AND MATERIALS

Type and Order No. [3]	Pump head	Diaphragm	Valves
NMP 830 KNDC B	Ryton [4] (PPS)	EPDM	Neoprene (CR)
NMP 830 KVDC B	Ryton [4] (PPS)	Viton (FPM)	Viton (FPM)
Chemically resistant version			
NMP 830 KTDC B	Ryton [4] (PPS)	PTFE coated	FFPM

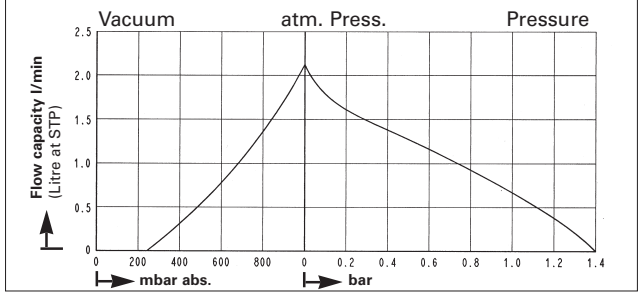
[4] Phillips Petroleum registered trade mark



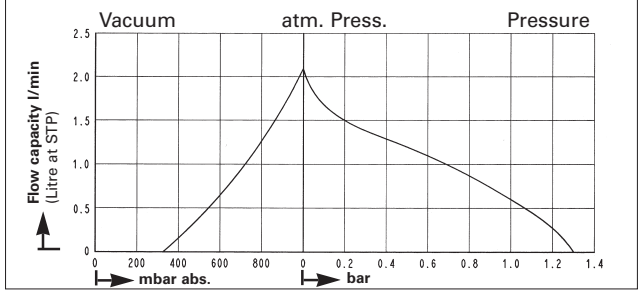
NMP 830 KNDC B



NMP 830 KVDC B



NMP 830 KTDC B



NMP 850 DC Motor

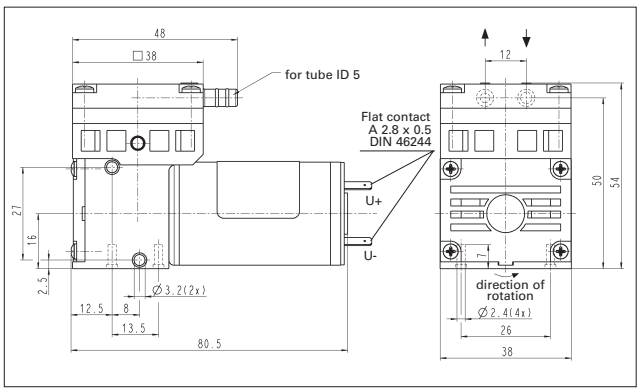
PERFORMANCE DATA

Type and Order No. [3]	Brush-type DC motor (V)	Delivery at atm. pressure (l/min) [1]	Max. operating pressure (bar g) [2]	Ultimate vacuum (mbar abs.)
NMP 850 KNDC	12	4.5	1.5	230
NMP 850 KTDC	12	3.9	1.5	300
NMP 850 KNDC	24	4.5	1.5	230
NMP 850 KTDC	24	3.9	1.5	300

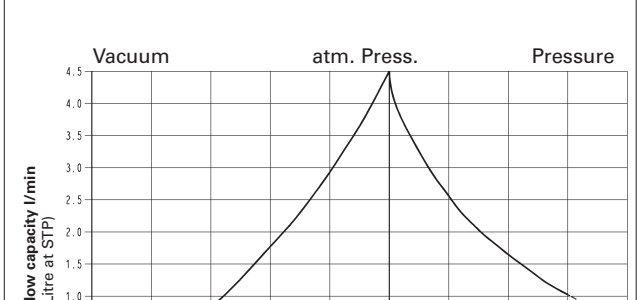
[1] Litre at STP [2] Continuous running

MODEL CODES AND MATERIALS

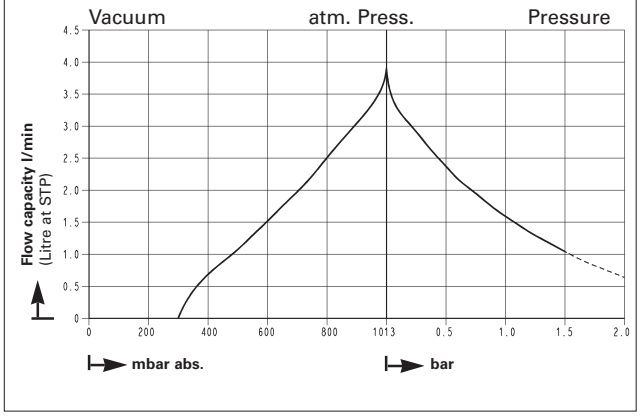
Type and Order No. [3]	Pump head	Diaphragm	Valves
NMP 850 KNDC	Ryton [4] (PPS)	EPDM	EPDM
Chemically resistant version			
NMP 850 KTDC	Ryton [4] (PPS)	PTFE coated	FFPM



NMP 850 KNDC



NMP 850 KTDC



NMP850 BLDC Motor

Version with brushless DC motor

PERFORMANCE DATA

Type and Order No. [3]	Brushless DC motor (V)	Delivery at atm. pressure (l/min) [1]	Max. operating pressure (bar g) [2]	Ultimate vacuum (mbar abs.)
NMP 850 KNDC B	12	4.2	1.5	230
NMP 850 KTDC B	12	3.5	1.5	300
NMP 850 KNDC B	24	4.2	1.5	230
NMP 850 KTDC B	24	3.5	1.5	300

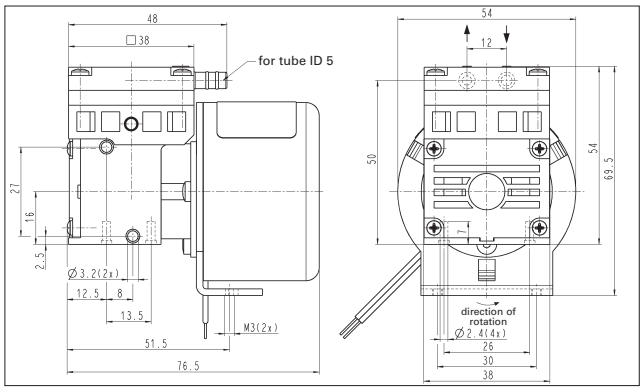
[1] Litre at STP [2] Continuous running

To comply with CE standards (EMC guidelines to EN 55014-1), see the specifications in the operating instruction.

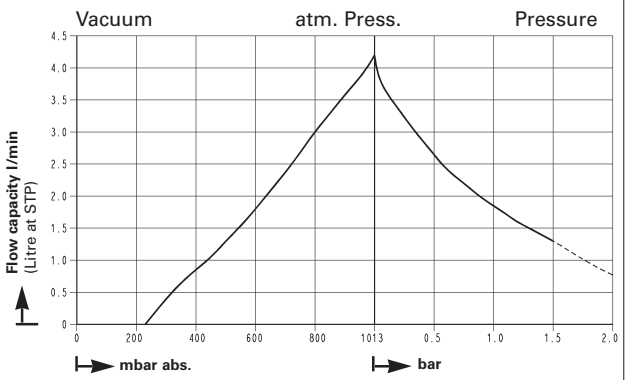
MODEL CODES AND MATERIALS

Type and Order No. [3]	Pump head	Diaphragm	Valves
NMP 850 KNDC B	Ryton [4] (PPS)	EPDM	EPDM
Chemically resistant version			
NMP 850 KTDC B	Ryton [4] (PPS)	PTFE coated	FFPM

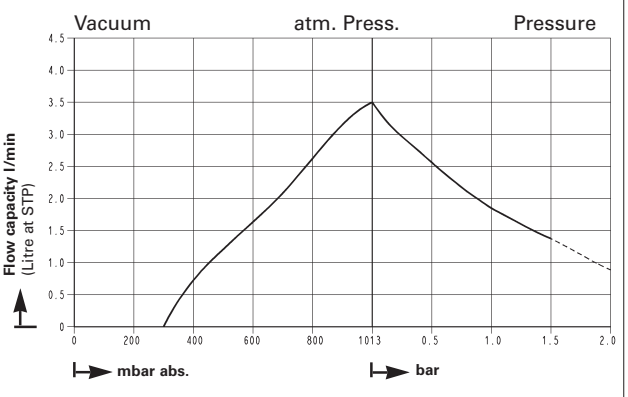
[4] Phillips Petroleum registered trade mark



NMP 850 KNDC B



NMP 850 KTDC B



NMP850.1.2 BLDC Motor

Version with brushless DC motor

PERFORMANCE DATA

Type and Order No. [3]	Brushless DC motor (V)	Delivery at atm. pressure (l/min) [1]	Max. operating pressure (bar g) [2]	Ultimate vacuum (mbar abs.)
NMP 850.1.2 KNDC B	12	8.0	1.5	230
NMP 850.1.2 KNDC B	24	8.0	1.5	230

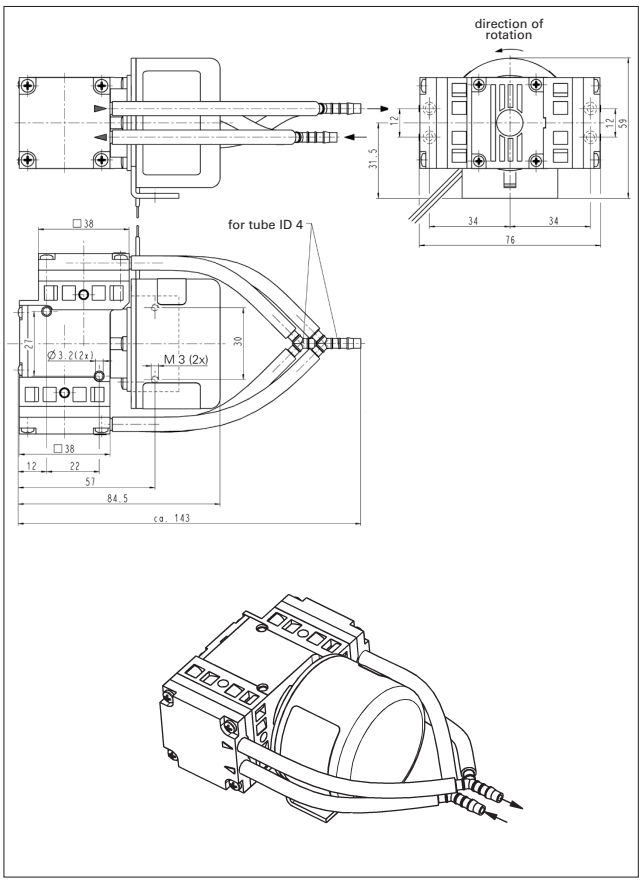
[1] Litre at STP [2] Continuous running

To comply with CE standards (EMC guidelines to EN 55014-1), see the specifications in the operating instruction.

MODEL CODES AND MATERIALS

Type and Order No. [3]	Pump head	Diaphragm	Valves
NMP 850.1.2 KNDC B	Ryton [4] (PPS)	EPDM	EPDM

[4] Phillips Petroleum registered trade mark



NMP 850.1.2 KNDC B