

Boxer Pumps > Products > Liquid Diaphragm Pump

19K liquid diaphragm pump with BLDC Motor (4 wire: supply, GND, speed input, rpm feedback)



## Technical Data

Free Flow <sup>1</sup>	800 ml/min
Max Pressure	2.0 bar
Max Vacuum	8.0 m H <sub>2</sub> O
<sup>1</sup> Value is show for nitrile diaphragm. See flow curves on page 2 for other elastomers.	
Free Flow (gas / dry)	850 ml/min
Max Suction Height (dry)	3.0 m H <sub>2</sub> O
Voltage Options	12 or 24 V DC
Power Consumption <sup>2</sup>	3.0 to 10.0 W
<sup>2</sup> Power consumption also shown on flow curves on page 2.	
Max current (start-up or locked rotor), electronically limited	3.0 A
Speed	500 to 3000 rpm
Wire Length	400 mm (5 mm stripped / tinned)
Wire Gauge	22 AWG
Max. Motor Surface Temperature	80 °C
Motor Insulation Class	B
Max Ambient Operating Temperature	50 °C
Max Media Temperature	100 °C
Elastomer Options:	
Diaphragm	Nitrile / EPDM / Viton (FKM)
Valves	Silicone / EPDM / Viton (FKM)
Gasket	EPDM / Viton (FKM)
Eccentric Options:	
	0.4 / <b>0.6</b> / 1.0 mm
Other Wetted Parts	PPS (polyphenylene sulphide)
Mounting	Optional anti-vibration mounting foot
Weight	175 g

**Bold** indicates configuration applicable to this datasheet

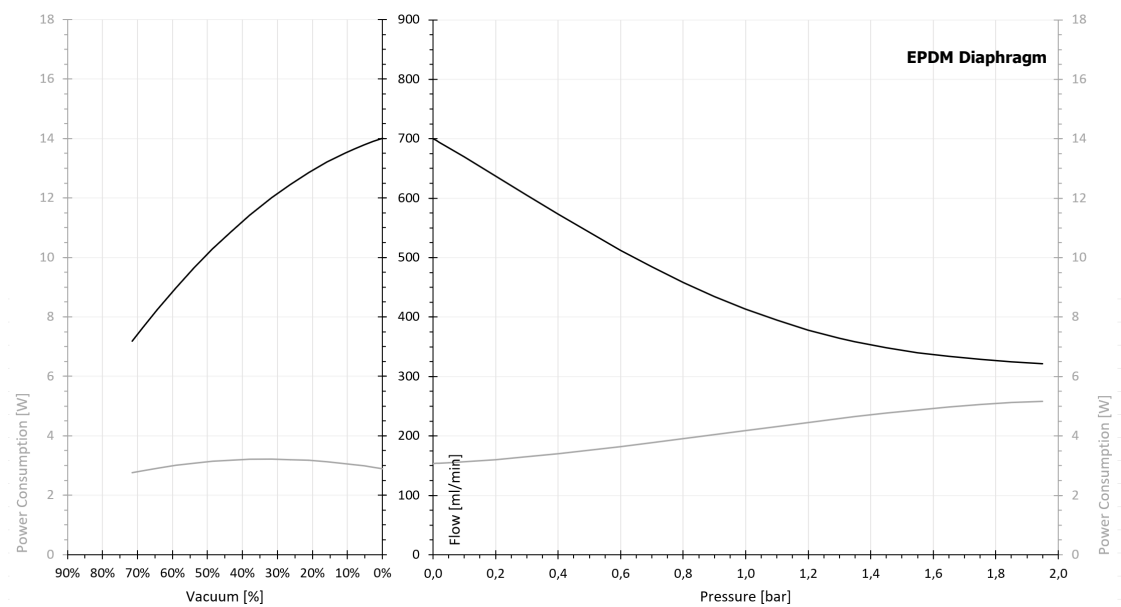
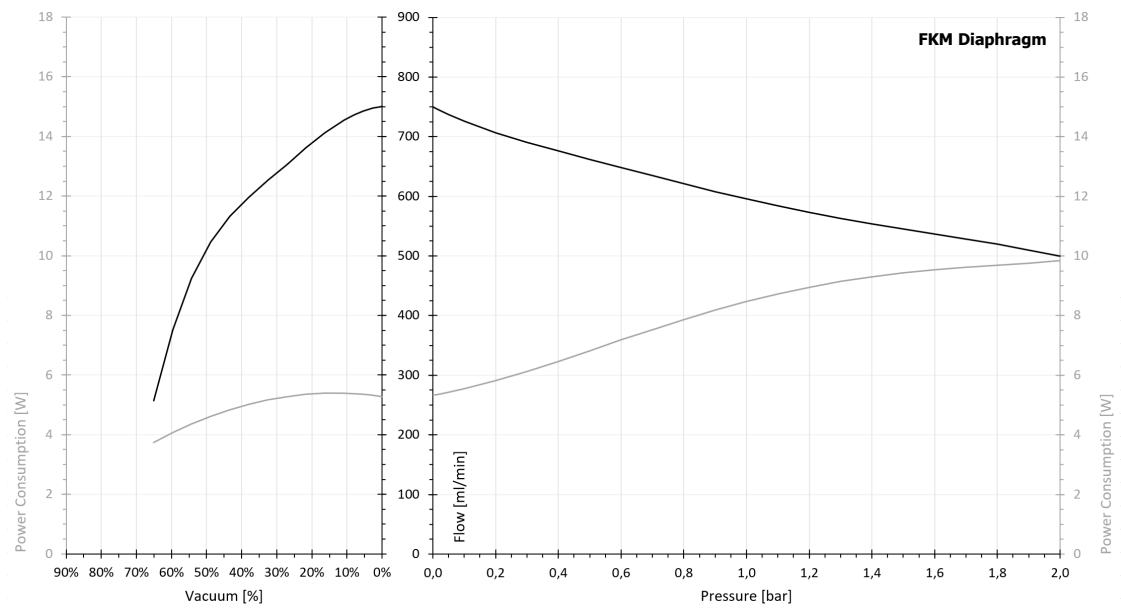
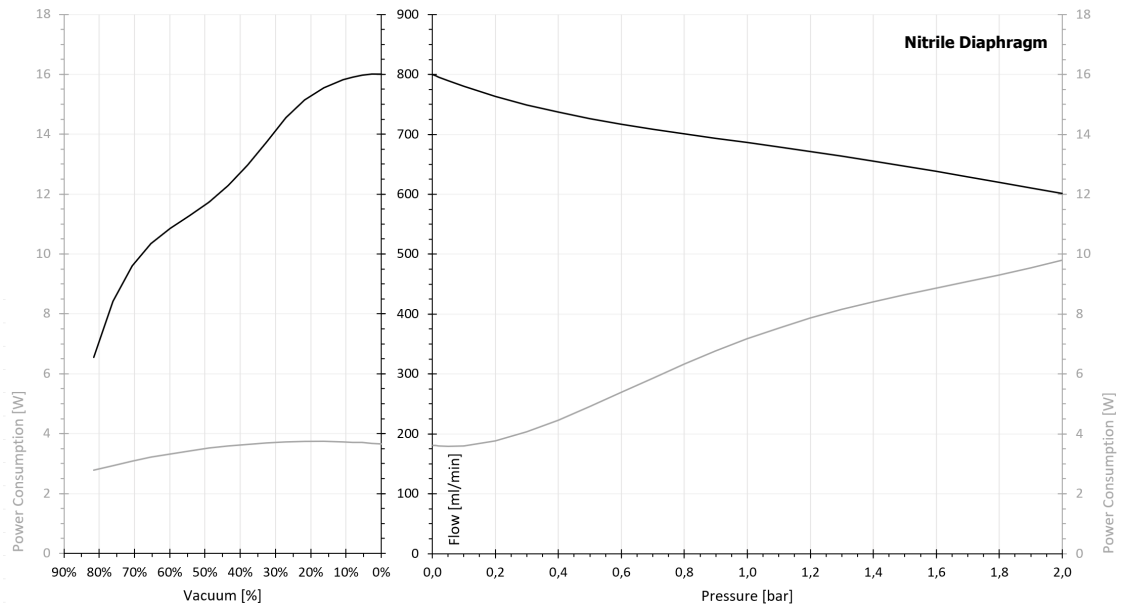
## Wiring Details / Speed Control

1	Red	Supply voltage, 12 or 24 V DC
2	Black	GND
3	Green	Speed control input: 0.5 to 4.5 V DC (or 5.0 V PWM, TTL compatible, with min. 30 kHz signal)
		Speed range: 500 to 3000 rpm
		Green wire can be connected to supply voltage for full speed (3000 rpm) operation
		Resolution: 10 bit
4	Yellow	Frequency (rpm) output, 1 pulse (+ 5.0 V) per revolution with 50% on time

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## Flow Curves

At max speed (Speed input at 4.5 V DC / 3000 rpm)



## Order Information

Description	Motor	Voltage (V DC)	Elastomer Materials			Part Number
			Diaphragm	Valve	Gasket	
19K Liquid Diaphragm Pump	BLDC	12	Nitrile <sup>1</sup>	Silicone	EPDM	19201.651
19K Liquid Diaphragm Pump	BLDC	12	EPDM	EPDM	EPDM	19201.652
19K Liquid Diaphragm Pump	BLDC	12	FKM	FKM	FKM	19201.653
19K Liquid Diaphragm Pump	BLDC	24	Nitrile <sup>1</sup>	Silicone	EPDM	19201.661
19K Liquid Diaphragm Pump	BLDC	24	EPDM	EPDM	EPDM	19201.662
19K Liquid Diaphragm Pump	BLDC	24	FKM	FKM	FKM	19201.663

<sup>1</sup> Nitrile diaphragms are reinforced

## Vibration Mounts

Optional vibration mounts are also available:

Material: Silicone (40° Shore)  
 Part Number: 19000.002  
 Additional Info: Mounted on motor, sold as set of 2



Material: EPDM (50° Shore)  
 Part Number: 19000.001  
 Additional Info: Supplied with 2 x M3 screw and washer to mount to pump body



## Engineering Drawing

Part Number Explanation:

1 9 2 0 1 . 6 [X] [X]

motor type  
5: 12V BLDC  
6: 24V BLDC

materials (diaphragm / valves / seals)  
1: Nitrile / Silicone / EPDM  
2: EPDM / EPDM / EPDM  
3: FKM / FKM / FKM

other options upon request: [info@boxerpumps.com](mailto:info@boxerpumps.com)

**DIMENSIONS STATED IN MM**

<b>BOXER</b>		Surface Quality	Part Number	Part Name	Form
Manufacture: 9-9-2022, Copenhagen, Denmark		ISO 2768-mK	19201.6[X][X]	19K Liquid BLDC	A3
Rev. (Date (D.M.Y.))	ChE	ADP	19201.6[X][X]	Project	Scale
01				19K	1:1
02					
03					
04					
05					
06					
07					
08					
09					
10	02.04.2024	ISO	ISO	File Name: 19K_Any	Sheet
					1 of 1

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