

Boxer Pumps > Products > Diaphragm Pump

3KD diaphragm pump with BLDC Motor.



Technical Data

Parallel Connection:

Free Flow	15.0 l/min
Max Pressure	2.0 bar
Max Vacuum	-700 mbar
Power Consumption	8.5 to 22.0 W

Series Connection (Vacuum Only):

Free Flow	10.0 l/min
Max Vacuum	-900 mbar
Power Consumption	8.5 to 10.0 W

Voltage Options	24 V DC
Max current (start-up or locked rotor), electronically limited	10.0 A
Speed	400 to 4000 rpm
Wiring Details / Speed Control	See next page
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	EPDM / Nitrile / Viton / Silicone
Valves	EPDM / Nitrile / Viton / Silicone
O-Rings	EPDM / Nitrile / Viton / Silicone

Eccentric Options:	0.8 / 1.0 / 2.0 mm
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Other Wetted Parts	PPS (polyphenylene sulphide)
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Mounting	Supplied with mounting bracket (see drawing, page 2)
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Weight	385 g
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Bold indicates configuration applicable to this datasheet

Wiring Details / Speed Control

Wire:		
1	Red	24 V DC
2	Black	GND
3	Green	Speed control input: 0 to 5V DC (or PWM with min. 15 kHz signal) Speed: 400 to 4000 rpm Resolution: 10 Bit (1024 steps)
4	White *	+ 5 V DC output (for use with speed control, see below)
5	Yellow	Frequency output, 1 pulse (+ 5 V) per revolution with 50% on time

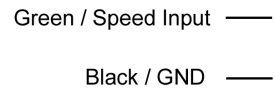
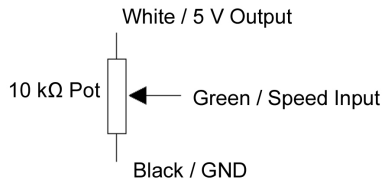
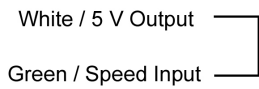
* White wire is supplied insulated. Damage will occur if connected to GND or any voltage.

The 3KD BLDC diaphragm pump has 3 options for speed control:

❶ Full Speed: white + 5 V DC output connected directly to green speed input.

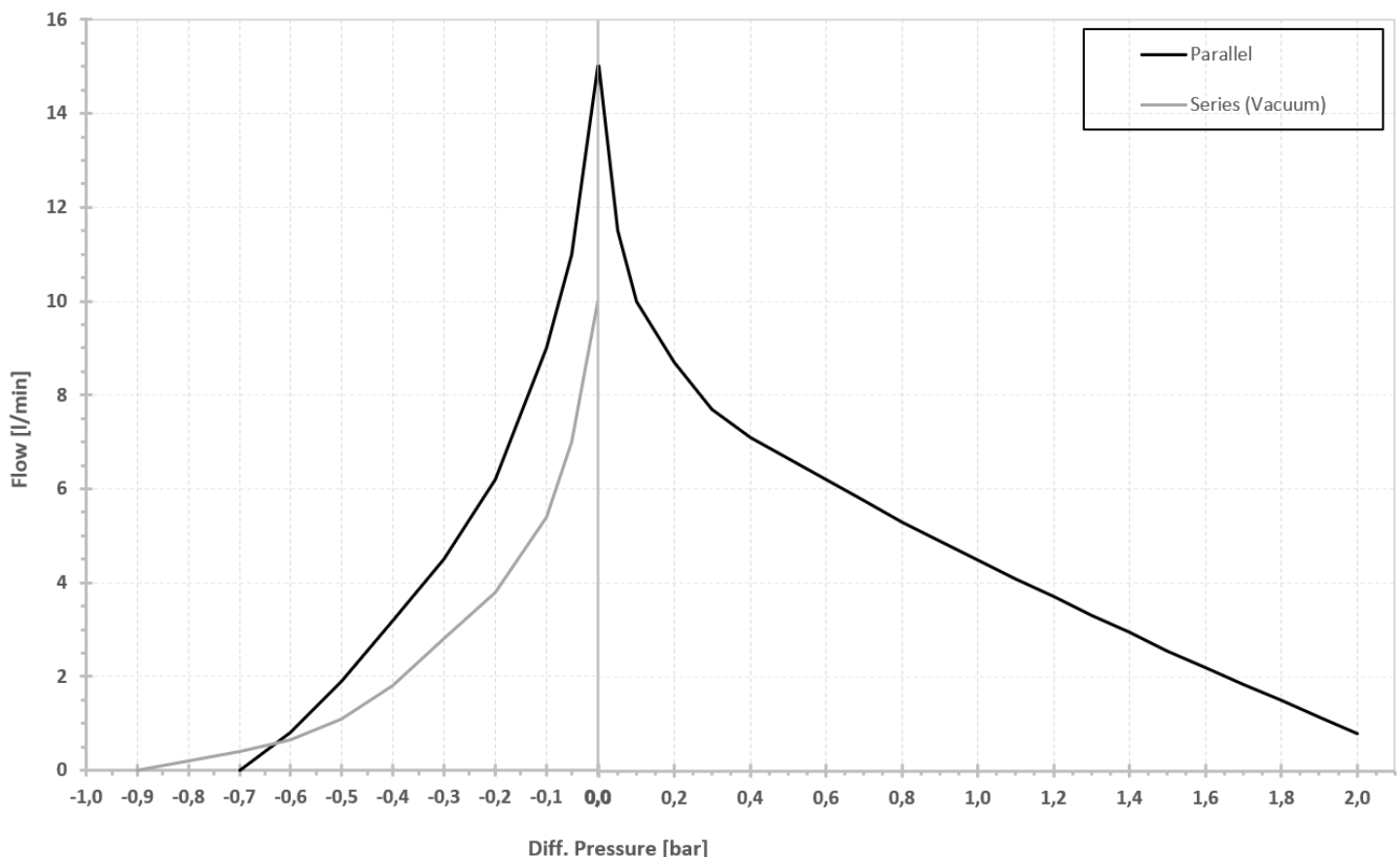
❷ Variable Speed: external 10 kΩ pot connected between white + 5V DC output and GND with wiper connected to green speed input.

❸ Variable Speed: green speed input connected directly to an external 0 to 5 V DC (or PWM) signal with common GND to motor.

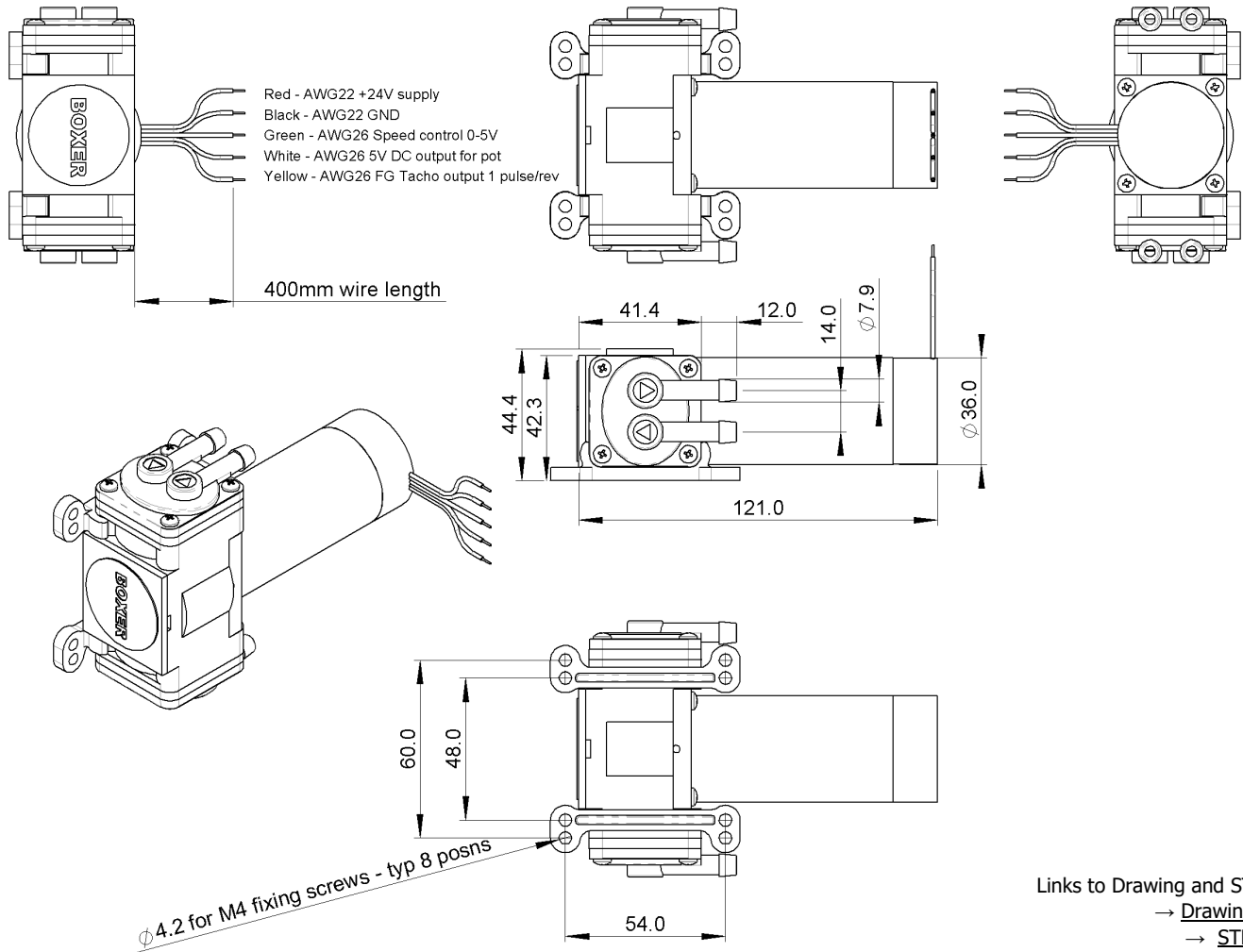


Flow Curve

At max speed (Speed Input at 5 V DC / 4000 rpm)



Drawing



Order Information

Part Number	Description
3112.610	3K 24 V BLDC

Please enquire for part numbers of other configurations.

BOX-it (Webshop for online purchase)

Sample quantities are available for direct online purchase:



→ [BOX-it](#)

Additional Information (Links):

- [3KD Webpage](#)
- [Boxer diaphragm pump overview](#)

All data is representative for initial selection purposes. It is the responsibility of the user to determine suitability for the intended use. Technical changes reserved.