

Boxer Pumps > Products > Liquid Diaphragm Pump

3MD liquid diaphragm pump with BLDC Motor.



## Technical Data

Free Flow	2.5 l/min
Max Pressure	2.0 bar
Max Vacuum	-600 mbar
Free Flow (gas / dry)	3.7 l/min
Max Suction Height (dry)	4.5 m H <sub>2</sub> O
Voltage Options	24 V DC
Power Consumption	7.2 to 19.7 W
Max current (start-up or locked rotor), electronically limited	2.0 A
Speed	0 to 1600 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	<b>EPDM</b> / Nitrile / Viton / Silicone
Valves	<b>EPDM</b> / Nitrile / Viton / Silicone
O-Rings	<b>EPDM</b> / Nitrile / Viton / Silicone
Eccentric Options:	0.8 / <b>1.0</b> mm
Other Wetted Parts	PPS (polyphenylene sulphide)
Mounting	Supplied with mounting bracket (see drawing, page 2)
Weight	385 g

**Bold** indicates configuration applicable to this datasheet

## Wiring Details / Speed Control

### Wire:

1	Red	24 V DC
2	Black	GND
3	Green <sup>1</sup>	Speed control input: 0 to 2.0 V DC (or PWM with min. 15 kHz signal) Speed: 0 to 1600 rpm Resolution: 10 bit (410 steps usable)
4	White <sup>2</sup>	+ 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

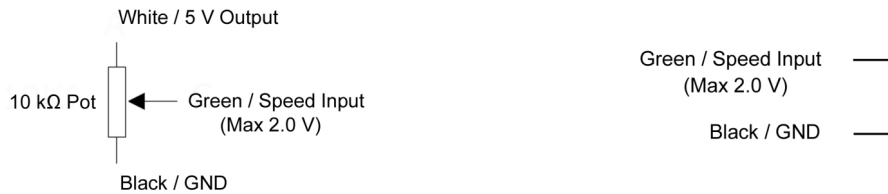
<sup>1</sup> Running above 2.0 V DC (> 1600 rpm) may cause cavitation and reduced liquid flow.

<sup>2</sup> White wire is supplied insulated. Damage will occur if connected to GND or any voltage.

The 3MD BLDC liquid diaphragm pump has 2 options for speed control:

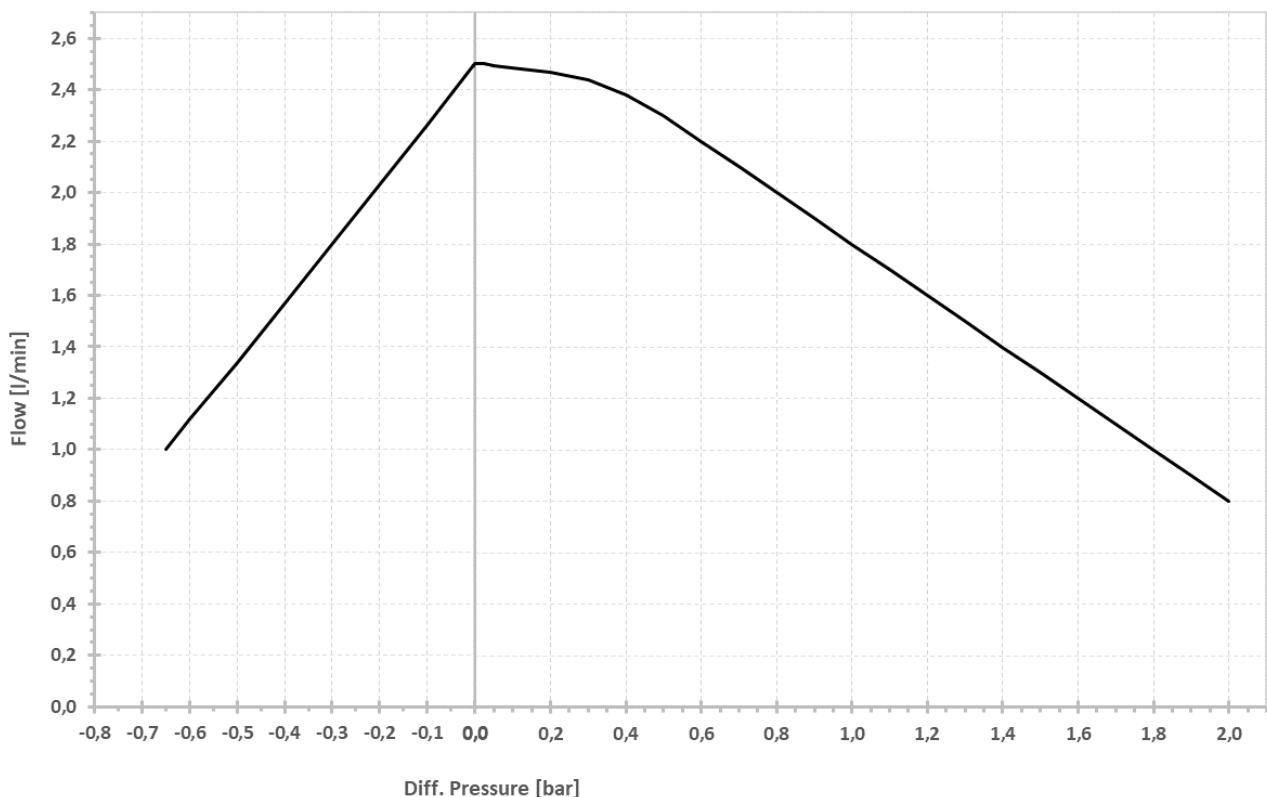
❶ Variable Speed: external 10 kΩ pot connected between white + 5V DC output and GND with wiper connected to green speed input.

❷ Variable Speed: green speed input connected directly to an external 0 to 2.0 V DC (or PWM) signal with common GND to motor.

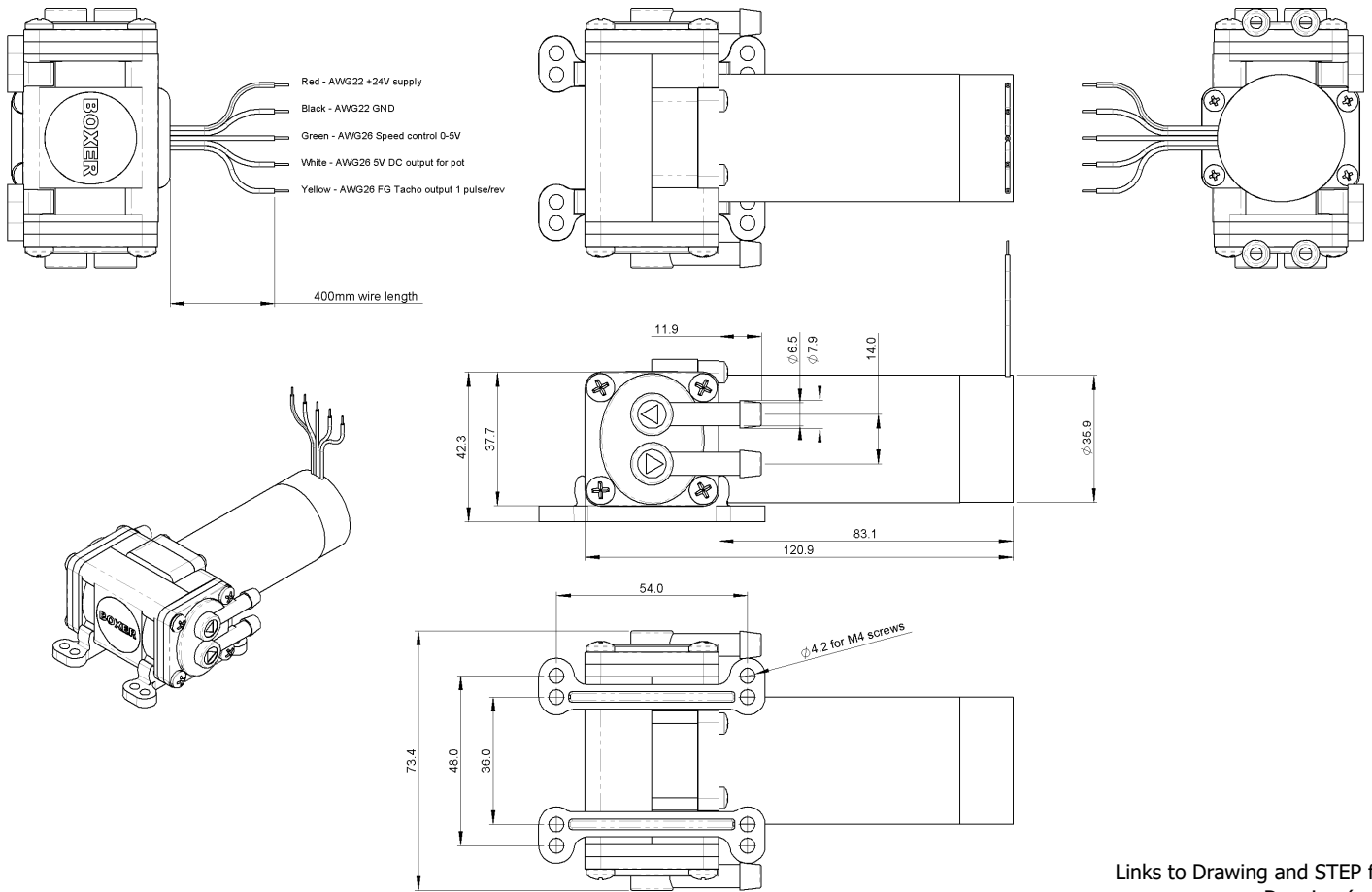


## Flow Curve

At max recommended speed (Speed Input at 2.0 V DC / 1600 rpm)



## Drawing



Links to Drawing and STEP file:  
 → [Drawing \(.png\)](#)  
 → [STEP \(.zip\)](#)

## Order Information

Part Number	Description
3232.610	3MD 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):

- [3MD Webpage](#)
- [Boxer liquid 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.