

Boxer Pumps > Products > Diaphragm Pump

5KD diaphragm pump with BLDC motor and integrated driver.



Technical Data

Free Flow	8.5 l/min
Max Pressure	+500 mbar
Max Vacuum	-400 mbar
Inlet	Clear silicone T-Piece, ID 5.5 mm
Outlet	Red silicone T-Piece, ID 5.5 mm
Voltage Options	24 V DC
Max Current (start-up or locked rotor), electronically limited	1.5 A
Power Consumption	4.0 to 10.5 W
Speed	500 to 5000 rpm
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Wire Length	400 mm (5 mm stripped / tinned)
Wire Gauge	26 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 / Silicone
Valves	EPDM / Silicone
Gasket	EPDM / Silicone
Eccentric Options:	1.00 / 1.25 mm
Other Wetted Parts	PPS (polyphenylene sulphide)
Mounting	Supplied with 2 x mounting clips (drawing, page 3)
Weight	165 g

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: 500 to 5000 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

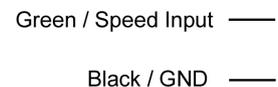
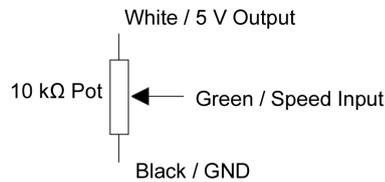
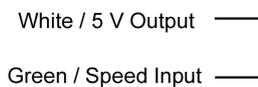
* White wire is supplied insulated. Damage will occur if connected to GND or any voltage.

The 5KD BLDC diaphragm pump has 3 options for speed control:

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

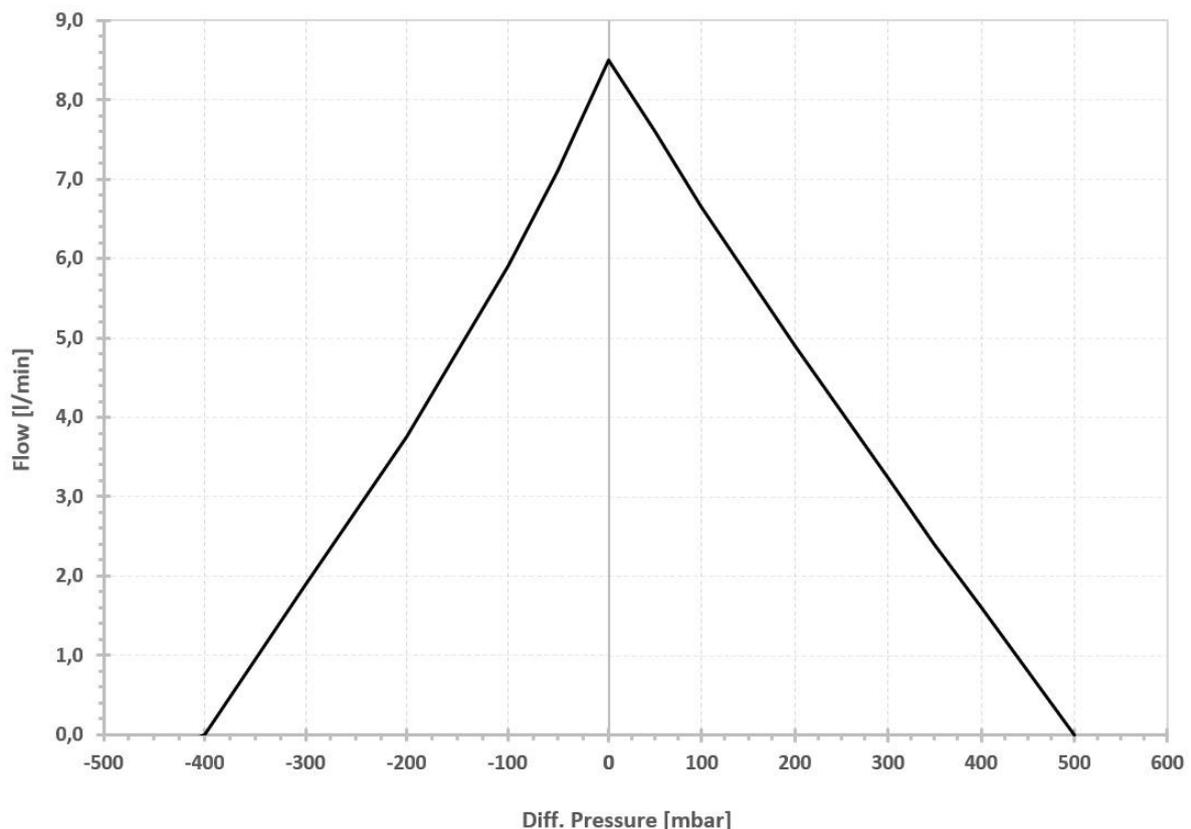
❷ Variable Speed: external 10 kΩ pot connected between white + 5V DC output and GND with wiper connected to green speed input.

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

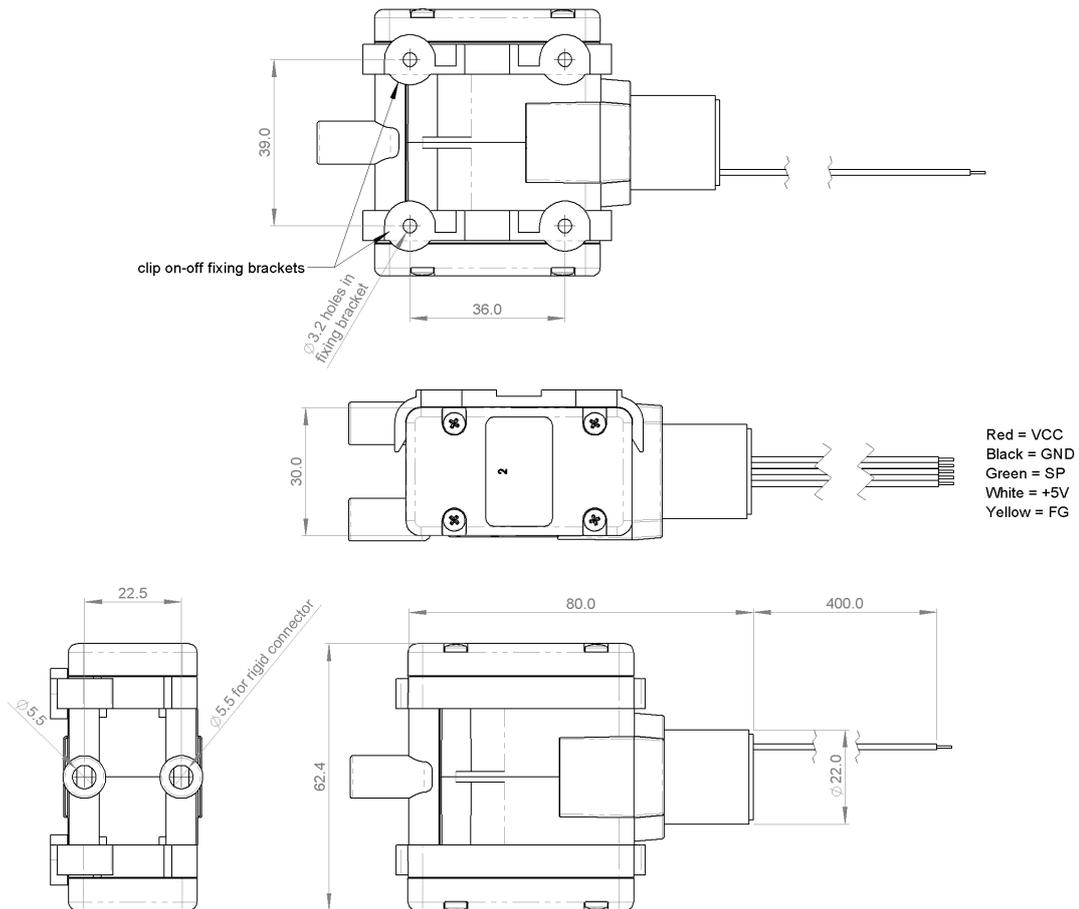


Flow Curve

At max speed (Speed Input at 5 V DC / 5000 rpm)



Drawing



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

Order Information

Part Number	Description
5312.610	5KD 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):

- [5KD 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.