### **BOXER**

# Boxer 3KL Series Diaphragm Pump Liquid

Liquid Flow Rate to 1.5 l/m

#### **DESCRIPTION**

The 3KL series is a robust and versatile single headed liquid diaphragm pump. Highest quality connection rod and motor bearings combined with slow speed contribute to maximum operational life and lowest power consumption. This series is offered with a quality brushed and versatile brushless motor. Like all other pumps in the Boxer range, this series can be customized to specific OEM requirements.



# **SPECIFICATIONS**

## **GENERAL**

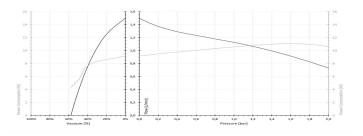
Free Flow	1.5 l/m	
Max Pressure	2.0 Bar (29 PSI)	
Max Vacuum	-800 mbar Brushed, -600 mbar Brushless	
Motor	12 & 24 Volt; DC & BLDC	
Housing Material	PPS (Polyphenylene Sulphide)	
Diaphragm Material	EPDM (other materials available)	
Valve Material	EPDM/Silicone (other materials available)	
Tubing Connection	Suitable for 6 mm ID tubing	
Eccentric	0.8 & 1.0 mm	
Max. Ambient Temp	50°C	
Max Media Temp	100°C	
Weight	385 g	

#### **FEATURES**

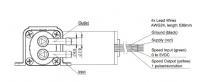
- BLDC versions at same costs as brushed DC
- approx. 1500 rpm with speed control 0 to 5V
- speed feedback signal (1 pulse per revolution) output
- single, double, and quad heads
- slow running

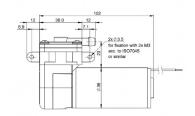
#### **FLOW CURVE**

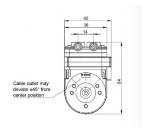
At max recommended speed (Speed Input at 4.5 V DC / 1500 rpm)



# **BRUSHED DIMENSIONS**







# WIRING DETAILS / SPEED CONTROL

Wire	Wire		
1	Red	24 V DC	
2	Black	GND	
3	Green	Speed control input: 0.5 to 4.5 V DC (or 5.0 V PWM with min. 15 kHz signal)	
		Speed range: 167 to 1500 rpm	
		Not recommended to run below 400 rpm (1.2 V)	
		Green wire can be connected to +24 V supply for full speed (1500 rpm) operation	
		Resolution: 10 bit	
4	Yellow	Frequency (rpm) output, 1 pulse (+ 5.0 V) per revolution with 50% on time	

# **ORDERING INFORMATION**

Model	Motor Type	Nominal Motor Voltage (VDC)
3211.650	Brushless	12
3211.660	Brushless	24
3111.129	Brushed	12
3111.252	Brushed	24