

Product Manual

Kamoer Fluid Tech (Shanghai) Co., Ltd.

Version: A/2

Product name	Micro air pump
Model	EDZP series
Release Date	2022.08.11
Manufacturer	Kamoer Fluid Tech (Shanghai) Co., Ltd.

A. Product Overview

1. Product images

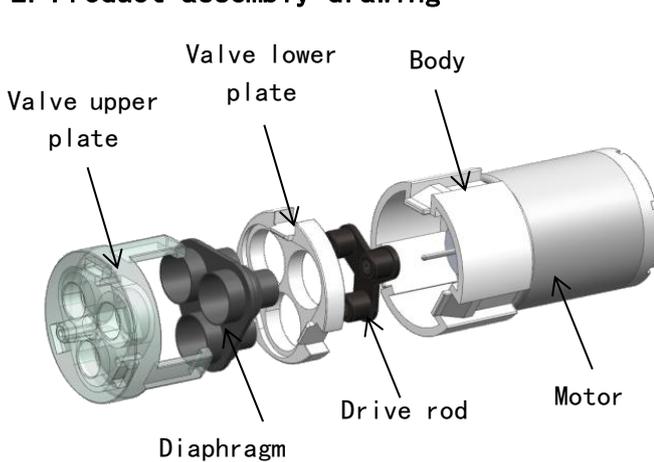


EDZP1

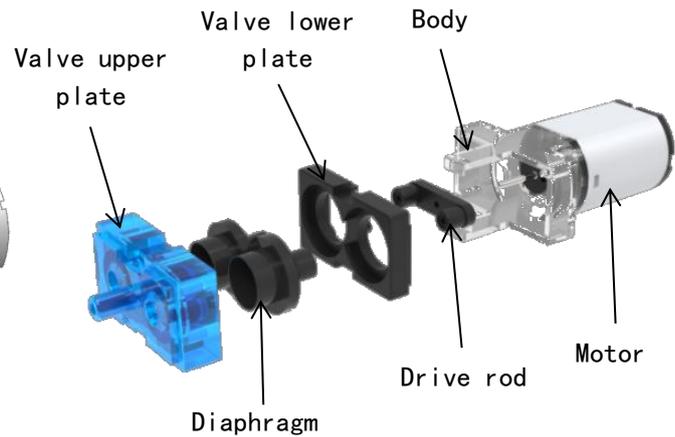


EDZP02

2. Product assembly drawing



EDZP1



EDZP02

3. Performance characteristics, typical applications

3.1 Performance characteristics

- ◆ Small size, powerful
- ◆ The appearance of the product is personally checked by the design master, beautiful and generous
- ◆ Low noise, low power design
- ◆ High-quality engineering plastics and rubber materials, showing good product stability
- ◆ Dry-running, durable and maintenance-free



3.2 Typical applications

- ◆ Medical devices: such as micro air pumps used as sphygmomanometers

3.3 Known risk notification

- ◆ The medium will be in contact with the pump head and the rubber, so it is necessary to check the chemical compatibility or conduct an immersion test when selecting the model
- ◆ The working environment of the product should not exceed 40° C, and the humidity should not exceed 70% (no condensation). The harsh working environment will cause premature damage to the product
- ◆ Frequent start and stop, overpressure or underpressure and other unreasonable working conditions will lead to premature damage of the pump
- ◆ High overloading may result in premature failure of the product
- ◆ Dust and other pollutants contained in the medium will contaminate the components in the pump and cause premature damage to the pump (please configure a pre-filter)

B. Product Specification

1. Technical Parameters

Project		EDZP1-D6	EDZP02-D3
Basic parameters	Flow	≥1 L/min	≥0.2 L/min
	Negative pressure	None	
	Positive pressure	0.08Mpa	0.06Mpa
	Power	≤2.5W	≤1.5W
	Noise	≤55 dB (under ambient noise 35dB, measured at a distance of 30cm)	
	Control method	Switch control	
	Weight	About 50g	About 14g
	Rated voltage	6V	3V
	Motor type	DC brush	
	Product life	Cycle more than 30000 times	
Applicable environment	Temperature range: 0°C~50°C; relative humidity: <80% (no condensation)		
Supplementary Note	<p>The above parameters are the test results under standard atmospheric pressure, room temperature 25° C, and medium as air.</p> <p>The performance parameters of the product are affected by the environmental conditions (air pressure, temperature, humidity, etc.) and the load conditions before and after the pump, so the above parameters may differ from the actual parameters.</p>		

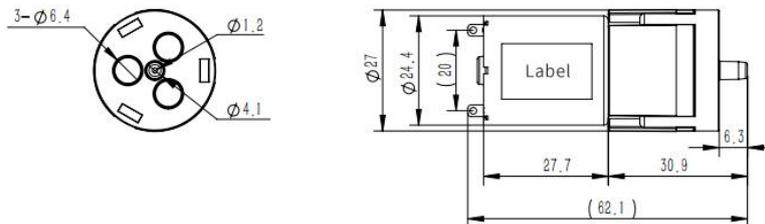


2. Product material

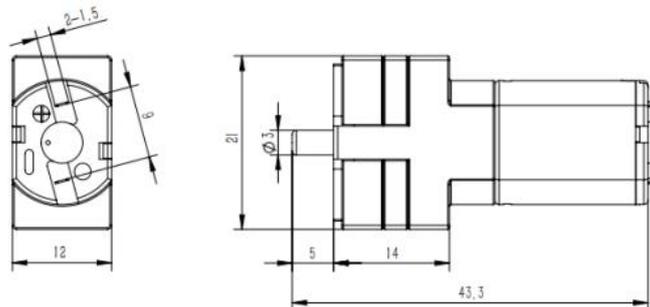
Model	Pump head	Pump body	Diaphragm	Valve	Eccentric wheel
EDZP1/EDZP02	PC	PC	EPDM	EPDM	POM

3. Product size

EDZP1



EDZP02



4. Reliability test

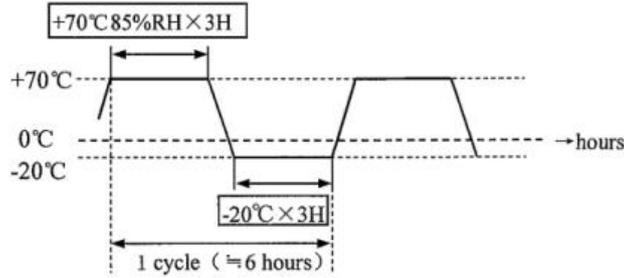
◆ Low temperature test Take it out after standing at -25°C for 96 hours, and then place it at room temperature for another 2 hours before measuring the characteristics.

◆ High temperature test After placing it at $+70^{\circ}\text{C}$ for 96 hours, take it out, and place it at room temperature for another 2 hours before performing characteristic measurements.

◆ High temperature and high humidity test $+70^{\circ}\text{C}$ 95%RH for 96 hours, then take it out, and place it at room temperature for another 2 hours before measuring the characteristics.

◆ Temperature and humidity cycle test $+70^{\circ}\text{C}85\%\text{RH}\times 3\text{H}\rightarrow -20^{\circ}\text{C}\times 3\text{H}$ Consider these as one cycle and repeat 10 cycles.

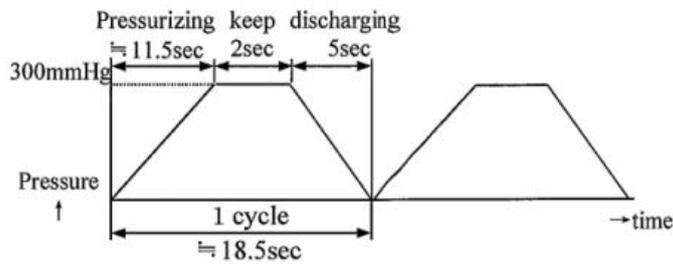




◆ The durability test is tested as follows, after 30,000 cycles, the following technical parameters can be met:

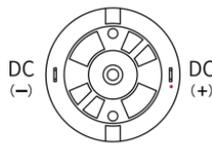
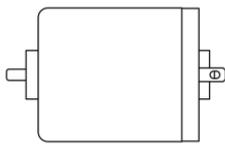
Maximum pressurization time: 15S Maximum current consumption: 520mA Air leakage: 10mmHg/min

Maximum noise: 60dB



◆ Landing test In the standard packaging state, the height from the concrete floor is 50cm, and after each of the six sides falls freely once, there is no abnormality.

5. Motor control



Note: According to the motor wiring diagram, the positive pole of the power supply is connected to the positive pole, and the negative pole is connected to the negative pole.

C. Optional Accessories

Name	Specifications	Function introduction
Fixture	/	Suitable size, soft and firm

