

D27 Flow Control Micro Gas Pump



Datasheet



Highlights

- No flow pulsation, smooth output
- High flow rate small volume
- Flow adjustable
- Low noise and vibration
- Multiple motor options
- Industrial-grade reliability
- Very compact size
- No flow pulsation

Applications

- Gas sampling
- Gas transmission
- Analytical instruments
- Portable device

5K hours
lifetime test



PERFORMANCE DATA

Model	Voltage (V DC)	Max. Load Current (mA)	Max. Peak Flow rate (L/min)	Max. Average Flow rate (L/min)	Max. Vacuum (-kPa)	Max. Pressure (kPa)
Material Option	Diaphragm:EPDM Valves:EPDM		Pump Head: Fiber reinforced PA6 and PP			
D27E	24V	≤200mA	≥3.7	≥3.7	≥35	/
D27E	12V	≤300mA	≥3.7	≥3.7	≥35	/
Material Option	Diaphragm:EPDM Valves:Silicon rubber		Pump Head: Fiber reinforced PA6			
D27M	24V	≤300mA	≥4.0	≥4.0	≥35	≥55
D27M	12V	≤150mA	≥4.0	≥4.0	≥35	≥55

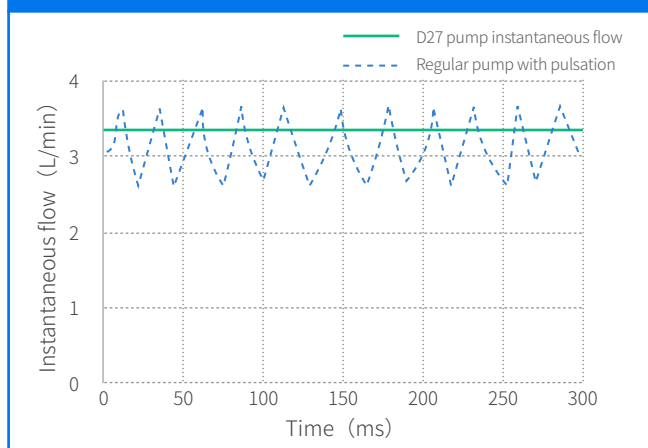
CONFIGURATION OPTIONS

Material Options	D27E	D27M
Pump Head	PA6 and PP	PA6
Diaphragm	EPDM	EPDM
Seals	EPDM	Silicon rubber
Motor	BLDC	BLDC
Connector Options		
Default hose connector		

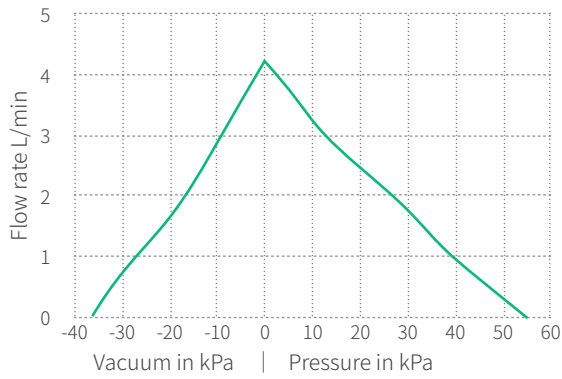
RELIABILITY DATA

Models	D27M equipped with BLDC motor	D27E equipped with BLDC motor		
Versions	Simplified	Standard		
Fully Loaded Lifetime (hrs)	testing	5000		
Unloaded Lifetime (hrs)	5000	8000		
Motor Lifetime (hrs)	8000	10000		
Test conditions	In a clean and non-corrosive laboratory, the pump is fully loaded (the inlet is blocked, the outlet is directly connected to the atmosphere) or unloaded (the inlet and outlet are directly connected to the atmosphere), and runs continuously around the clock; ambient temperature: 5°C~33 °C, relative humidity: 50%-85%, fluctuates with the climate.			
Working Condition				
Operating temperature	Permissible ambient temperature is 0°C~50°C, it is not suitable to be exposed to the sun, and it should work in a clean and ventilated environment			
Medium	Permissible temperature of the medium is 5°C~50°C, the transferring gas is allowed to be rich in water vapor, but cannot contain solid particles			
Wetted materials	EPDM, FKM as optional; fiber reinforced nylon, tolerance to alcohol, acid, alkali, etc. (except strong acid, concentrated acid, lipids, benzene, gasoline, etc.)			

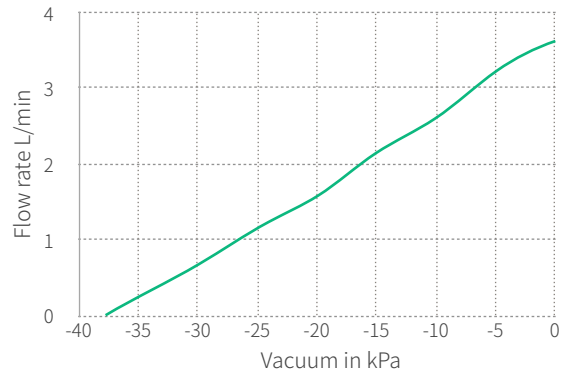
D27 Instantaneous Flow Pulsation Curve



D27M WITH BLDC MOTOR FLOW CURVES



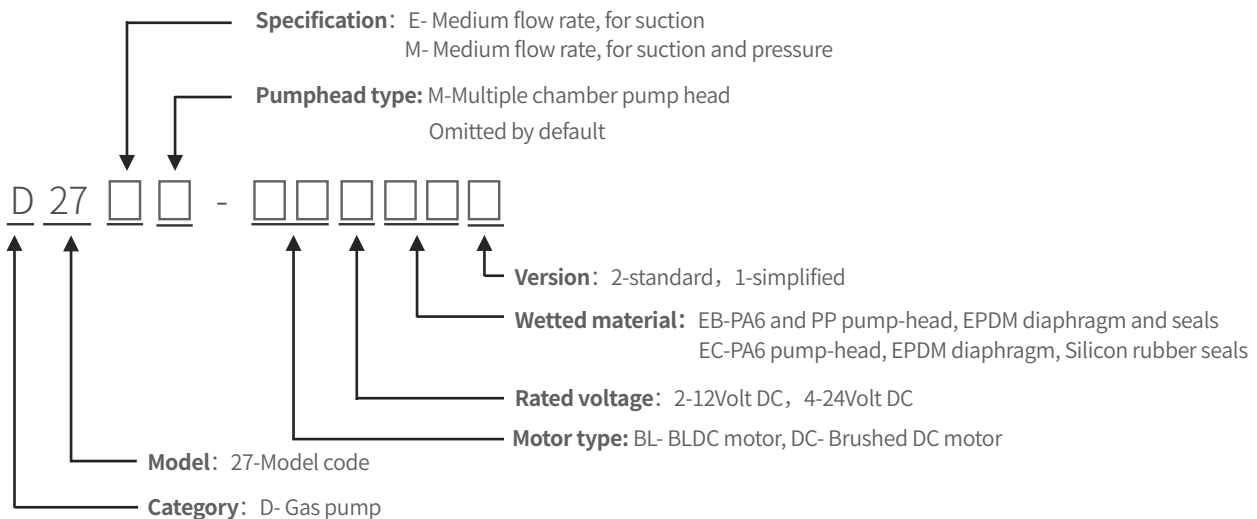
D27E WITH BLDC MOTOR FLOW CURVES



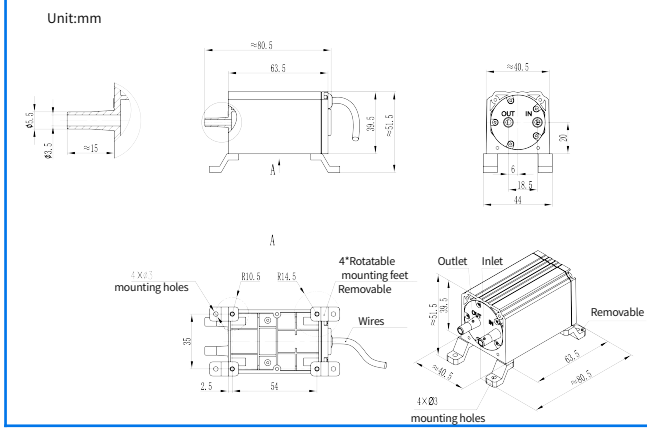
LIST OF ORDERABLE MODELS

Model	Description
D27E-BL2EB2	For medium flow vacuuming, equipped with 12V brushless motor, the quality version is the standard version
D27E-BL4EB2	For medium flow vacuuming, equipped with 24V brushless motor, the quality version is the standard version
D27M-BL2EC1	For medium flow vacuuming and pressure, equipped with 12V brushless motor, the quality version is the simplified version
D27M-BL4EC1	For medium flow vacuuming and pressure, equipped with 24V brushless motor, the quality version is the simplified version
For more other configurations, materials and quality options, please contact our company	

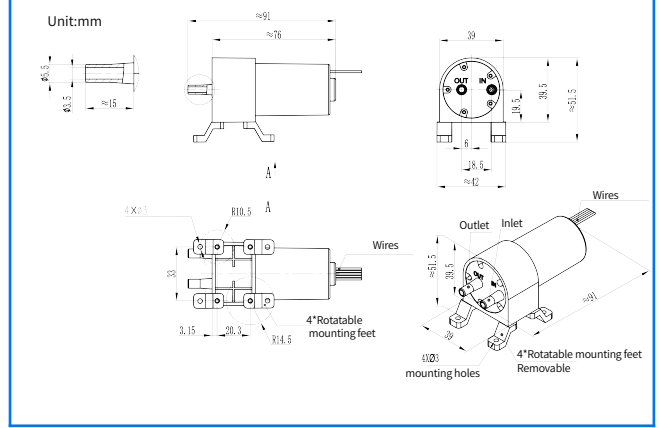
D27E MODEL KEY



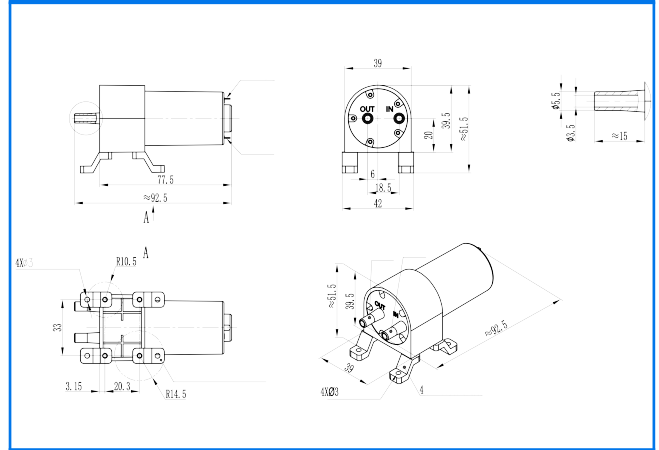
D27M WITH DC MOTOR DIMENSIONS



D27E WITH BLDC MOTOR DIMENSIONS



D27E WITH DC MOTOR DIMENSIONS



ACCESSORIES		
Descriptions	Illustration	Function
Shock-isolation mounting feet		Reduce the impact of vibration on the equipment during the operation of the pump. This accessory comes with the pump*4
Filter		The 80-mesh filter protect both pumps and other upstream instrumentation and hydraulic circuits against particulate, crystals and fibers . It is recommended to replace it regularly. This accessory comes with the pump*1
Check valve		Enhance the cut-off capability of the gas circuit system to ensure one-way gas flow. This accessory can be purchased on demand
Flow stabilizer		Eliminate and reduce pulsation, make gas output smooth and stable, this accessory can be purchased on demand
Manual control valve		It can be used to manually adjust the gas flow rate, pressure and vacuum. This accessory can be purchased on demand
DC power adapter		220V AC to DC switching power supply, this accessory can be purchased on demand
Silencer		It is used to eliminate and reduce the airflow noise caused by pumping operation, this accessory can be purchased on demand



To be a driving force in innovation of human fluid technology

Create value for customers by offering high quality fluid solutions

This document is for reference only and does not constitute any promise or guarantee. The parameters and experimental data indicated in this document come from Hilintec life and aging laboratory and supplier laboratories. In the actual user system, due to differences in actual usage conditions and experimental conditions, relevant value will change accordingly. Due to product improvement needs, the parameters may be adjusted without notice. Please contact the manufacturer or agent for confirmation before purchasing. The trademarks, pictures, and logos in this document are owned by Chengdu Hailin Technology Co., Ltd. or a third party with legal rights.



www.mini-pump.com