

S23

Micro Diaphragm Liquid Pump



Datasheet



Highlights

- Can be used to transmit gases and liquids
- Driven by high-end BLDC motor
- Dry running, maintenance free
- Long service life under max load
- Industrial-grade reliability
- Multiple self-protection
- Compact size
- Self-priming

Applications

- Printing
- Laboratory
- Medical equipment
- Analytical instruments

10K hours
lifetime test



PERFORMANCE DATA

Model	Voltage (V DC)	As Gas Pump			As Liquid Pump		
		Max. Load Current (mA)	Max. Average Flow rate (L/min)	Max. Vacuum (-kPa)	Max. Load Current (mA)	Free Flow Rate (L/min)	
Material Option A	Diaphragm:EPDM Valves:EPDM Pump Head: Fiber reinforced PA6						
S23L	12	≤170	≥0.95	≥15	≤250	≥0.4	
Material Option B	Diaphragm:FKM Valves:FKM Pump Head: Fiber reinforced PA6						
S23L	12	≤170	≥0.7	≥15	≤250	≥0.45	
Note: The input voltage requires 12V±10%							

PERFORMANCE DATA

Model	Configuration	Max. Suction Height (mWg)	Flow Rate@ Max. Suction Height	Max. Pressure Heigh (mWg)	Flow Rate@ Max. Pressure Heigh
S23L-2_J-0000	EPDM+BLDC type A	1.4	250	1.2	200
S23L-2_J-0020	EPDM+BLDC type B	1.4	135	1.2	180
S23L-2_J-1020	FKM+BLDC type B	1.5	250	1.3	300

CONFIGURATION OPTIONS

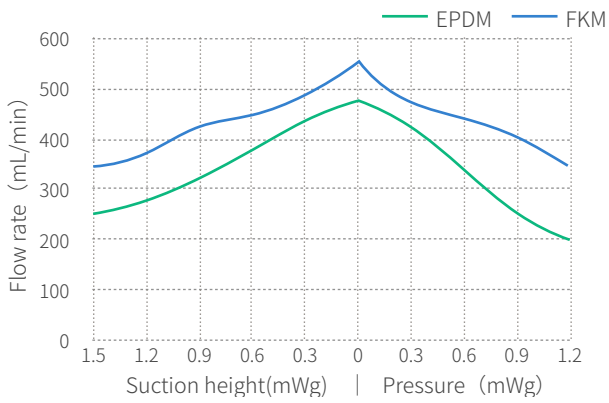
Material Options

Pump Head	Fiber reinforced PA6	
Diaphragm	EPDM	FKM
Valves	EPDM	FKM
Motor	BLDC Type A	BLDC Type B

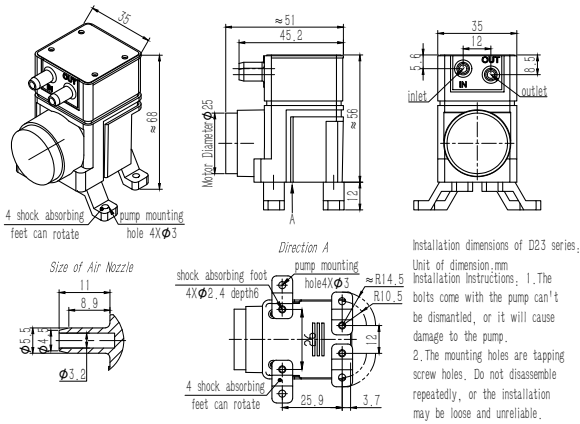
RELIABILITY DATA

Models Versions	S23L		
	Simplified	Standard	Premium
Fully Loaded Lifetime (hrs)	2500	6000	10000
Unloaded Lifetime (hrs)	8000	12000	18000
Motor Lifetime (hrs)	10000	15000	20000
Test conditions	In a clean and non-corrosive laboratory, the pump is fully loaded (continuous pumping water) 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 environmen		
Medium	Permissible temperature of the liquid medium is 5°C~50°C and gaseous media is 0°C~50°C , the transferring gas cannot contain solid particles or oil mist. It is not allowed to pump oily liquid and high viscosity liquid.		
Wetted materials	EPDM, fiber reinforced nylon, tolerance to alcohol, acid, alkali, etc. (except strong acid, concentrated acid, lipids, benzene, gasoline, etc.)		

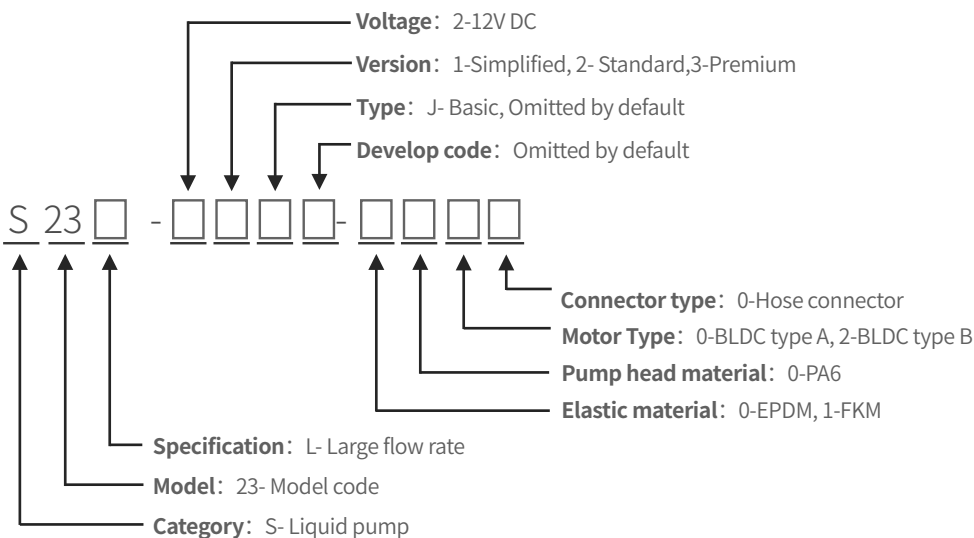
S23L-12V FLOW CURVE



S23 DIMENSIONS



S23 MODEL KEY



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



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