

D50 Flow Control

Micro Vacuum Pump & Compressor



Datasheet



Highlights

- Low electromagnetic interference
- Optional corrosion-resistant material
- Long service life under max load
- Modular pneumatic connection options
- Low noise level and vibration
- Driven by BLDC motor
- Industrial-grade reliability
- Good air tightness
- Multiple self-protection
- Compact size

Applications

- Gas sampling
- Medical equipment
- Analytical instruments
- Pneumatic automation

10K_{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 A	Diaphragm:EPDM Valves:EPDM Pump Head: Fiber reinforced nylon						
D50S	24V	≤0.65A	≥11	≥6.8	≥45	≥85	
D50L	24V	≤1.1A	≥15	≥10	≥50	≥100	
D50H	24V	≤1.5A	≥22	≥15	≥62	≥120	
Material Option B	Diaphragm:FKM Valves:FKM Pump Head: Fiber reinforced nylon						

CONFIGURATION OPTIONS

Material Options

Pump Head	Fiber reinforced PA6	
Diaphragm	EPDM	FKM
Valves	EPDM	FKM
Motor	BLDC	

Connector Options

Default PA hose connector/PP hose connector/Stainless steel hose connector/PC6 push-in quick connector/PC8 push-in quick connector /PA Rc1/8 inside thread/Stainless steel Rc1/8 inside thread

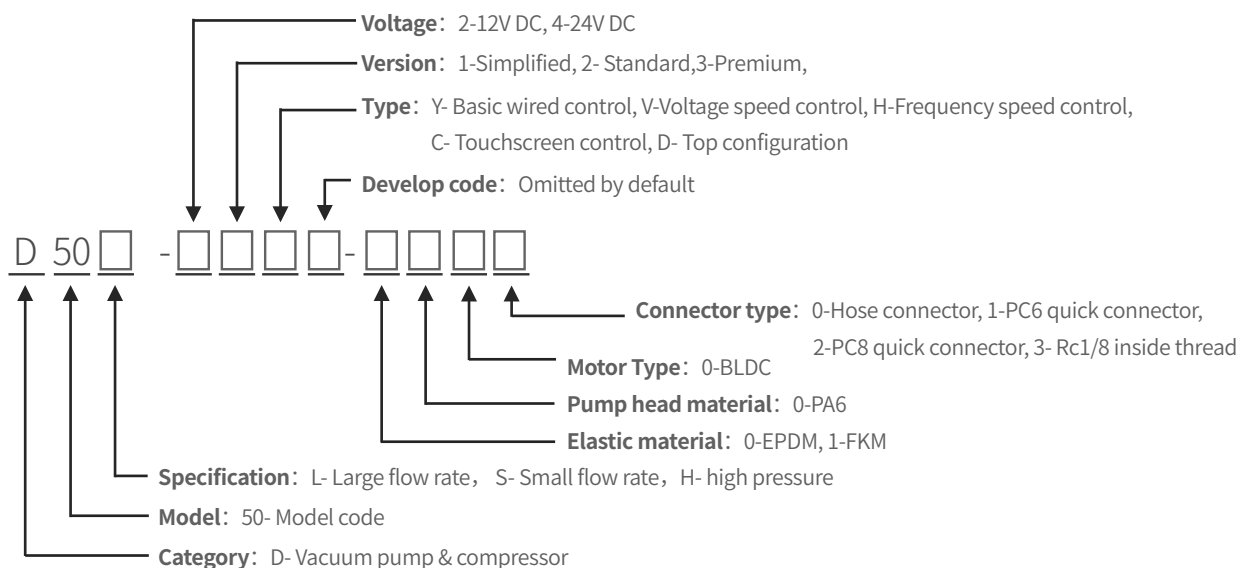
Function Options

Basic wired control	Voltage speed control	Frequency speed control	Touchscreen control	Top configuration
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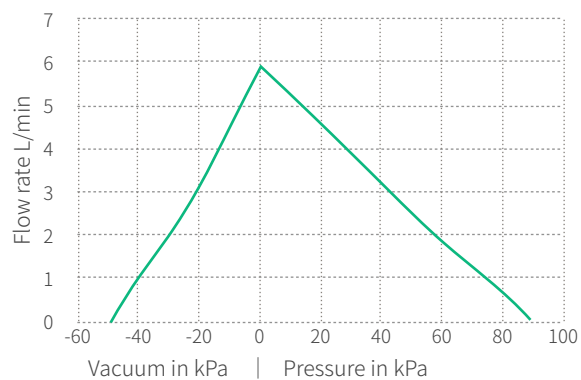
RELIABILITY DATA

Models	D50S D50L			D50H		
Versions	Simplified	Standard	Premium	Simplified	Standard	Premium
Fully Loaded Lifetime (hrs)	5000	7500	10000	5000	7500	9000
Unloaded Lifetime (hrs)	8000	12000	15000	8000	12000	15000
Motor Lifetime (hrs)	10000	15000	20000	10000	15000	20000
Test conditions	In a clean and non-corrosive laboratory, the pump is fully loaded (the outlet is blocked, the inlet 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.)					

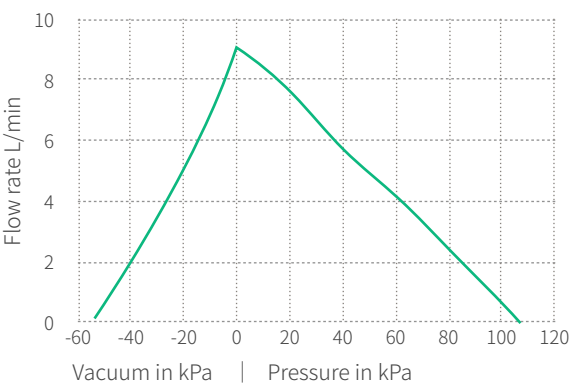
D50 MODEL KEY



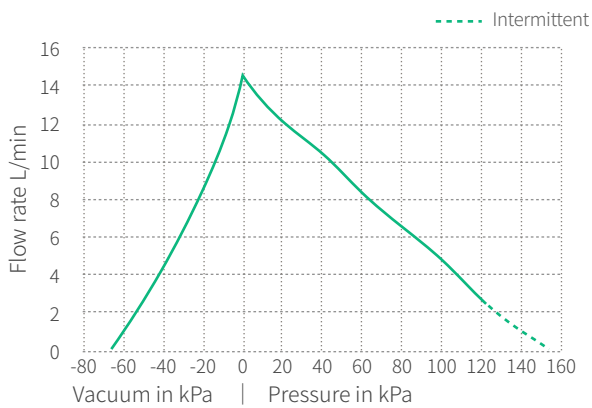
D50S FLOW CURVES



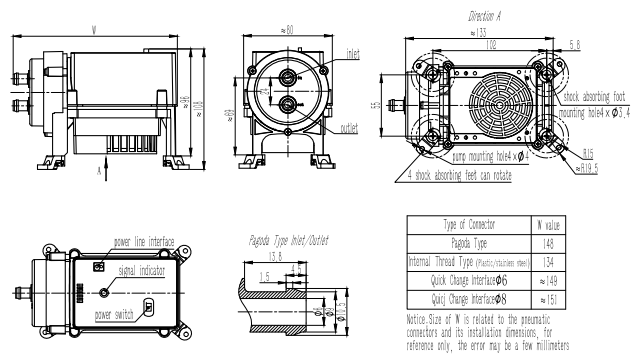
D50L FLOW CURVES



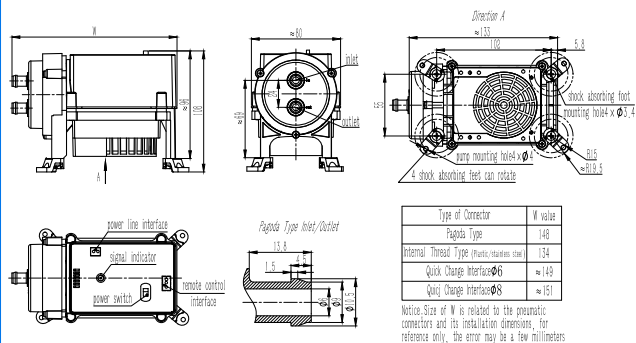
D50H FLOW CURVES



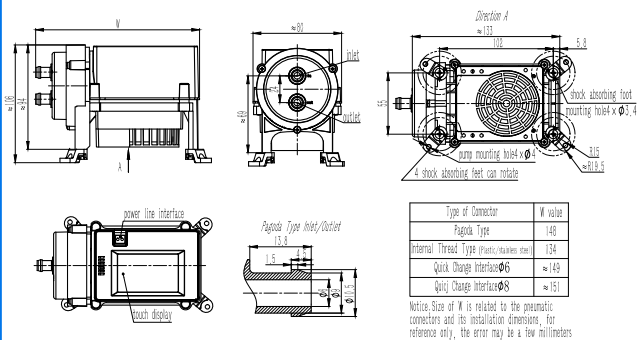
D50 BASIC WIRED CONTROL TYPE



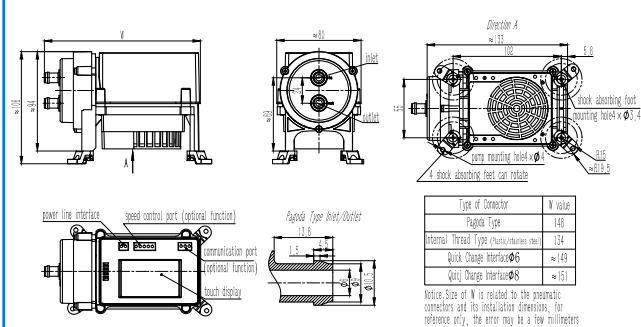
D50 VOLTAGE/FREQUENCY CONTROL TYPE



D50 TOUCHSCREEN CONTROL TYPE



D50 TOP CONFIGURATION TYPE



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
Manul control valve		It can be used to manually adjust the gas flow rate, pressure and vacuum. This accessory can be purchased on demand
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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