

S20

Micro Diaphragm Liquid Pump



Datasheet



Highlights

- Up to 0.6MPa output pressure
- Driven by high-end BLDC motor
- High sealing and pressure resistance
- Long service life under max load
- Industrial-grade reliability
- Excellent corrosion resistance
- Reliable self-priming
- Compact size

Applications

- Printing
- Laboratory
- Medical equipment
- Analytical instruments

10K hours
lifetime test

PERFORMANCE DATA

Model	Voltage (V DC)	As Liquid Pump				As Gas Pump			
		Free Flow Rate (mL/min)	Max. Pressure (kPa)	Suction Height (mH ₂ O)	Max. Load Current (A)	Max. Gas Flow rate (mL/min)	Max. Vacuum (-kPa)	Max. Pressure (kPa)	Max. Load Current (A)
Material ES	Diaphragm:EPDM Valves:EPDM Pump Head: PPS								
S20PS-BL2	12	230	500	3	0.21	190	33	53	0.16
S20PS-BL4	24	240	500	3	0.12	200	33	53	0.08
S20PS-BA2	12	300	600	3	0.33	240	32	50	0.25
S20PS-BA4	24	320	600	3	0.23	250	32	50	0.16
Material KS KV	Diaphragm:PTFE Valves:FFKM Pump Head: PPS(KS) or PVDF(KV)								
S20PS-BL2	12	175	500	3	0.24	170	33	55	0.18
S20PS-BL4	24	175	500	3	0.12	180	33	55	0.09
S20PS-BA2	12	220	600	3	0.37	205	35	60	0.29
S20PS-BA4	24	230	600	3	0.20	230	35	60	0.20

CONFIGURATION OPTIONS

Material Options	Default	Optional Items	
Pump Head	PPS	PVDF	
Diaphragm	EPDM	PTFE	FKM
Valves	EPDM	FFKM	FKM
Motor	Standard BLDC	Type A BLDC	

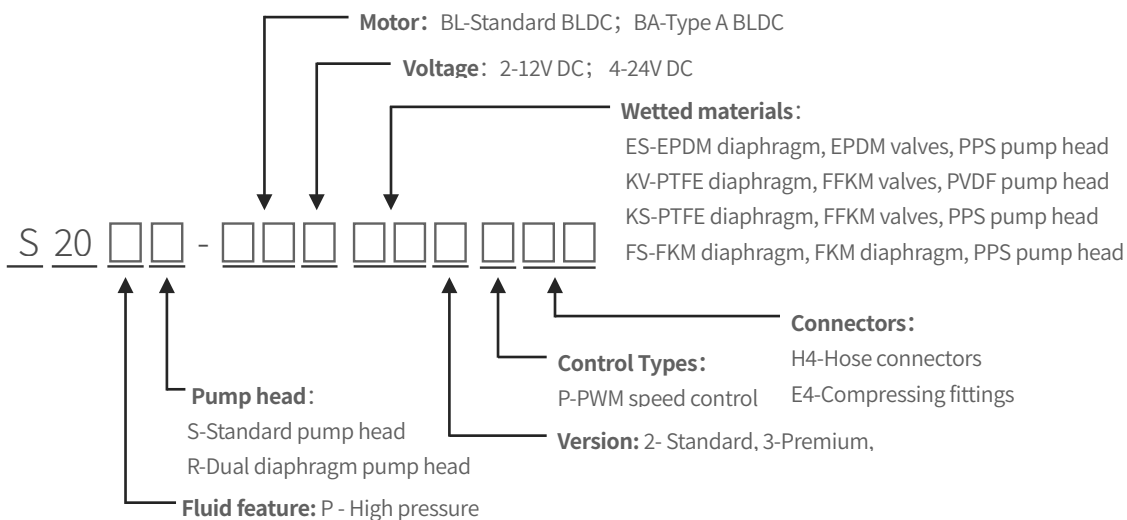
Connector Options		
	Hose connector	Compression fittings

Pump head Options		
	Standard pump head	Dual diaphragm pump head

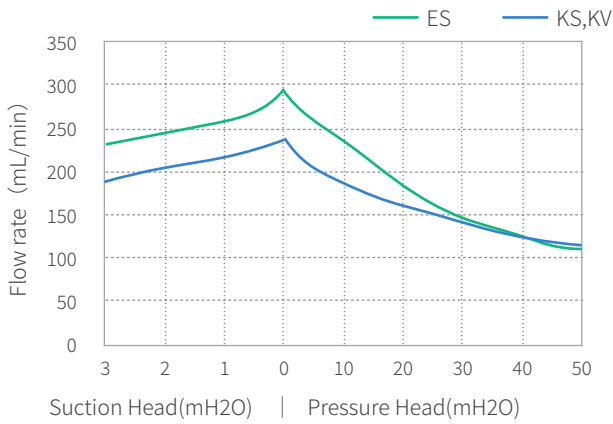
RELIABILITY DATA

Models	S20PS	
	Standard	Premium
Fully Loaded Lifetime (hrs)	2000*	5000*
Unloaded Lifetime (hrs)	6000*	10000*
Motor Lifetime (hrs)	8000	15000
Test conditions	In a clean and non-corrosive laboratory, the pump is fully loaded (pumping water at the highest rated pressure) or unloaded (continuous pumping water), and runs continuously around the clock; ambient temperature: 5°C~33 °C, relative humidity: 50%-85%, fluctuates with the climate. *Represents design life target, actual product life is being tested	
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 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, PPS as default, a wide range of corrosion-resistant materials are available. tolerance to alcohol, acid, alkali, etc. (except strong acid, concentrated acid, lipids, benzene, gasoline, etc.)	

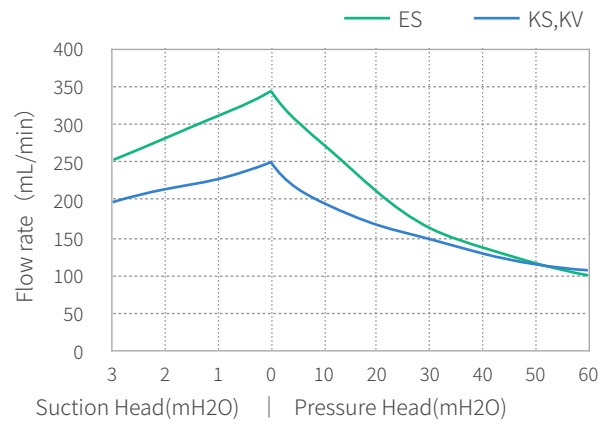
S20 MODEL KEY



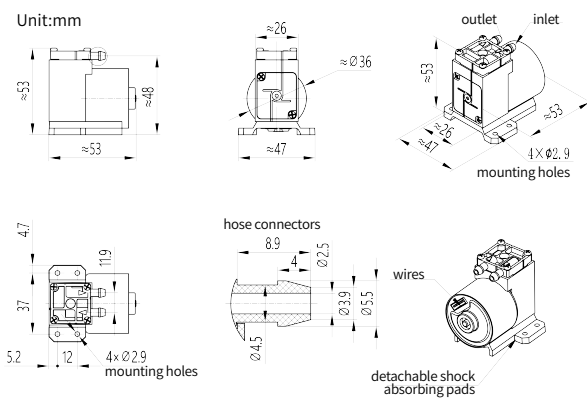
**S20PS WITH STANDARD BLDC MOTOR
FLOW CURVES**



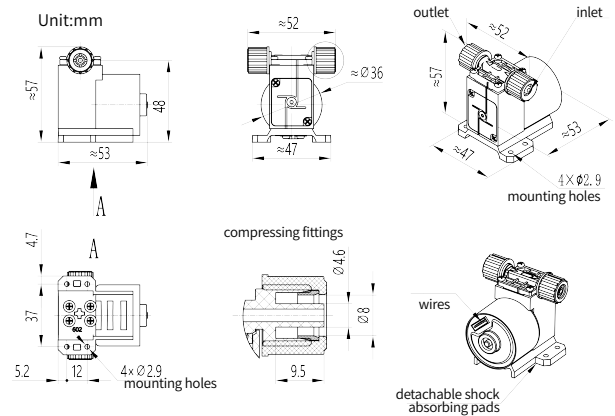
**S20PS WITH TYPE A BLDC MOTOR
FLOW CURVES**



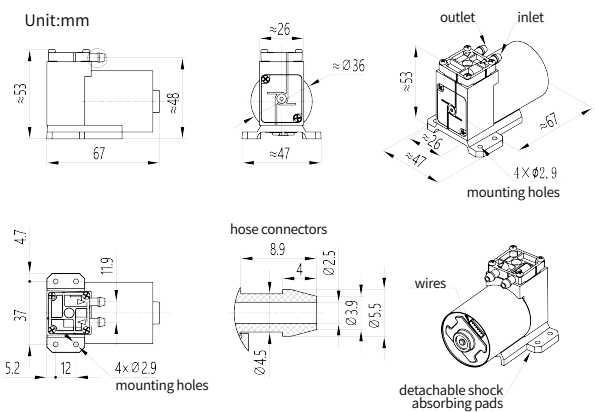
**S20PS WITH STANDARD BLDC MOTOR &
H4 HOSE CONNECTORS DIMENSIONS**



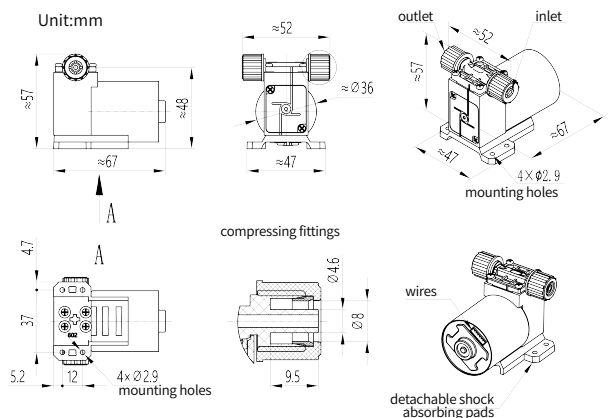
**S20PS WITH STANDARD BLDC MOTOR &
E4 COMPRESSING FITTINGS DIMENSIONS**



**S20PS WITH TYPE A BLDC MOTOR &
H4 HOSE CONNECTORS DIMENSIONS**



**S20PS WITH TYPE A BLDC MOTOR &
E4 COMPRESSING FITTINGS 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
Back pressure relief valve		Back pressure safety valve, when the back pressure exceeds the safety range, it will open to relieve the pressure to protect the the liquid system and the pump from overpressure damage . This accessory is available for purchase 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



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