

QF5050SU

Quaternary Diaphragm Pumps

Single-Use – Biotech/Biopharma

Features

- Fully disposable machined polypropylene pump chamber
- Easy replacement
- 4-piston technology
- Multi-option installation flexibility
- Complete flow range with one drive
- Gentle product treatment
- Low pulsation
- Wide range of flow with linear turndown
- Self-priming
- Safe dry-run operation
- Elimination of cleaning validation and cross contamination

Applications

- Filtration systems (TFF, etc.)
- Chromatography systems
- Feeding pump
- Virus filtration
- Sterile filtration

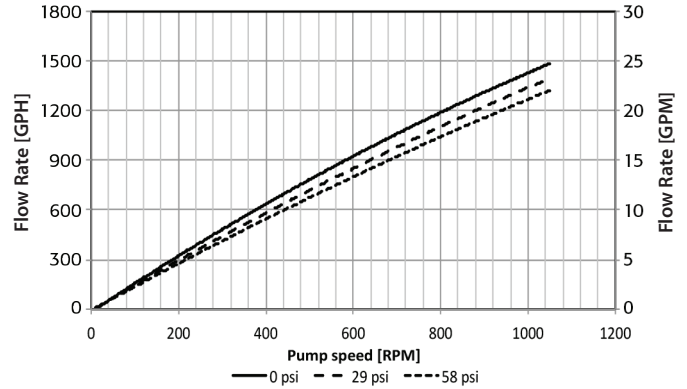
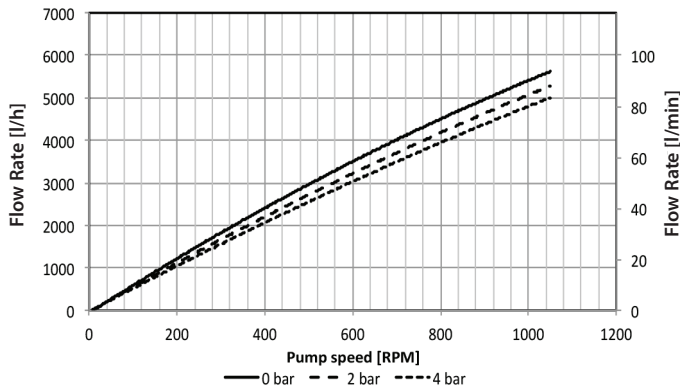


Technical Data

QF5050SU Servo Motor	
Flow Rate Maximum:	
Eccentric Shaft 6°	5000 l/h (1321 gph)
Flow Rate Minimum:	
Eccentric Shaft 6°	50 l/h (13 gph)
Pressure:	
Temperature of Fluid < 40° C (104° F)	4 bar (58 psi)
Temperature of Fluid > 40° C (104° F)	4 bar (58 psi)
Maximum Temperature:	
Fluid	60° C (140° F)
Autoclave	130° C (260° F)
Suction Lift Dry at 1200 rpm:	
Eccentric Shaft 6°	4-4.5 m (13.1-14.7 ft)
Volume Specifications:	
Approximated Volume per Revolution at Free Output	95 ml
Filling Volume Without Connectors	820 ml
Connection Specification (Standard):	
Connectors	1.5" TC
Position of Connectors	Front

QF5050SU Servo Motor	
Product Wetted Materials (Standard):	
Pump Chamber	PP
Valve Plate	PP
Diaphragms	TPE
Valves	EPDM / SS316L
O-rings	EPDM
Certificates/Proofs (Optional):	
Elastomere (product wetted)	USP <88> Cl. VI; FDA21CFR177; BSE/TSE Safe; USP 87/381/661
Motor (Standard):	
Rated speed	3000 min ⁻¹ (2.662:1 reduction)
Voltage	400 V
Power	3 KW
Pump Dimension with Motor and Housing:	
Length	440 mm (17.32")
Width	325 mm (12.80")
Height	320 mm (12.60")
Pump Weight with Motor and Housing:	
	51 kg (112 lb.)

Performance Charts



Depending on the selected motor/frequency drive combination, the motor frequency and the resulting pump speed might differ.

Accessories

Control Box

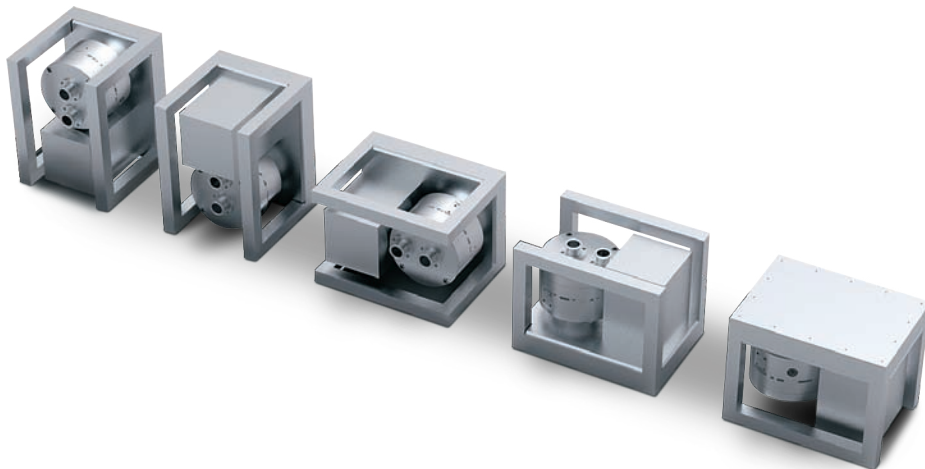


Image may differ from product

- Variable speed controller with integrated touch pad for manual speed control
- Configurable for remote speed control with 4-20 mA analogue input
- 400 V, 3P
- Hygienic 1.4301 housing, IP 54
- Easy plug & play installation

Diaphragm Sensor

- Sensor installed in ring drive unit
- Detection of all liquids
- Signal output to a controller, if diaphragm is ruptured



Distributed by:



QF5050SU

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QF5050S

Quaternary Diaphragm Pumps

Multiple-Use – Biotech/Biopharma

Features

- 4-piston-technology
- Multi-option installation flexibility
- Complete flow range with one drive
- Gentle product treatment
- Low pulsation
- Wide range of flow with linear turndown
- Compact hygienic design
- Self-priming
- Safe dry-run operation
- Also available as single-use version

Applications

- Filtration systems (TFF, etc.)
- Chromatography systems
- Feeding pump
- Virus filtration
- Sterile filtration



Technical Data

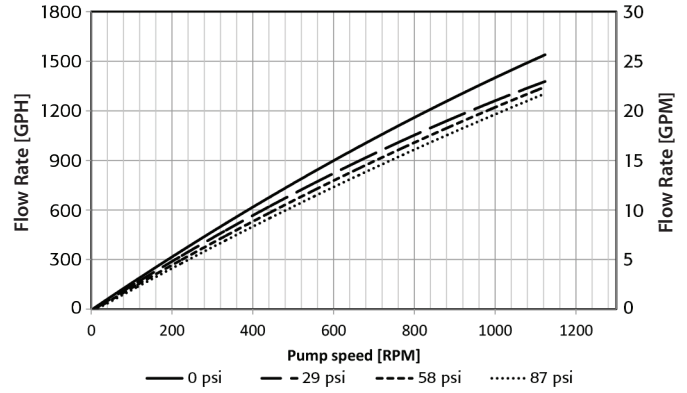
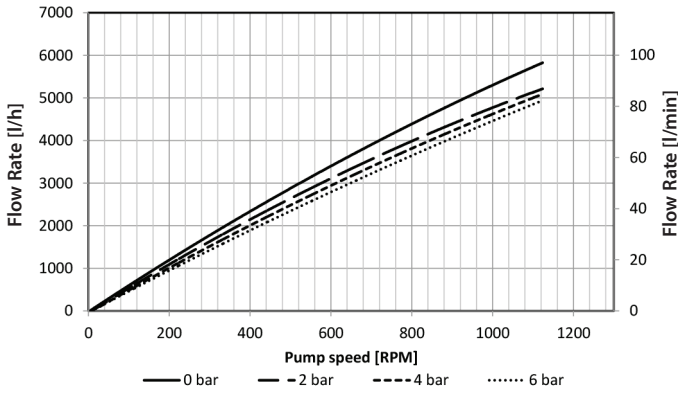
QF5050S Servo Motor	
Flow Rate Maximum:	
Eccentric Shaft 6°	5000 l/h (1321 gph)
Flow Rate Minimum:	
Eccentric Shaft 6°	50 l/h (13 gph)
Pressure:	
Temperature of Fluid < 40° C (104° F)	6 bar (87 psi)
Temperature of Fluid > 40° C (104° F)	4 bar (58 psi)
Maximum Temperature:	
Fluid	80° C (176° F)
CIP	90° C (194° F)
SIP*	130° C (260° F)
Autoclave*	130° C (260° F)
Suction Lift Dry at 1200 rpm:	
Eccentric Shaft 6°	4-4.5 m (13.1-14.7 ft)
Volume Specifications:	
Approximated Volume per Revolution at Free Output	95 ml
Filling Volume Without Connectors	820 ml
Connection Specification (Standard):	
Connectors	1.5" TC
Position of Connectors	Front

QF5050S Servo Motor	
Product Wetted Materials (Standard):	
Pump Housing	SS316L
Valve Plate	SS316L or PP
Diaphragms	TPE
Valves	EPDM
O-rings	EPDM
Certificates/Proofs (Optional):	
Elastomere (product wetted)	USP <88> Cl. VI; FDA21CFR177; BSE/TSE Safe
Stainless Steel Parts (product wetted)	3.1; Surface Roughness; Ferrite Content
Motor (Standard):	
Rated speed	3000 min ⁻¹ (2.662:1 reduction)
Voltage	400 V
Power	3 KW
Pump Dimension with Motor and Housing:	
Length	440 mm (17.32")
Width	325 mm (12.80")
Height	320 mm (12.60")
Pump Weight with Motor and Housing:	
	66 kg (146 lb.)

Other connection specifications, materials and motors available on request.

*With SS316L valve plate only

Performance Charts



Depending on the selected motor/frequency drive combination, the motor frequency and the resulting pump speed might differ.

Accessories

Control Box



Image may differ from product

- Variable speed controller with integrated touch pad for manual speed control
- Configurable for remote speed control with 4-20 mA analogue input
- 400 V, 3P
- Hygienic 1.4301 housing, IP 54
- Easy plug & play installation

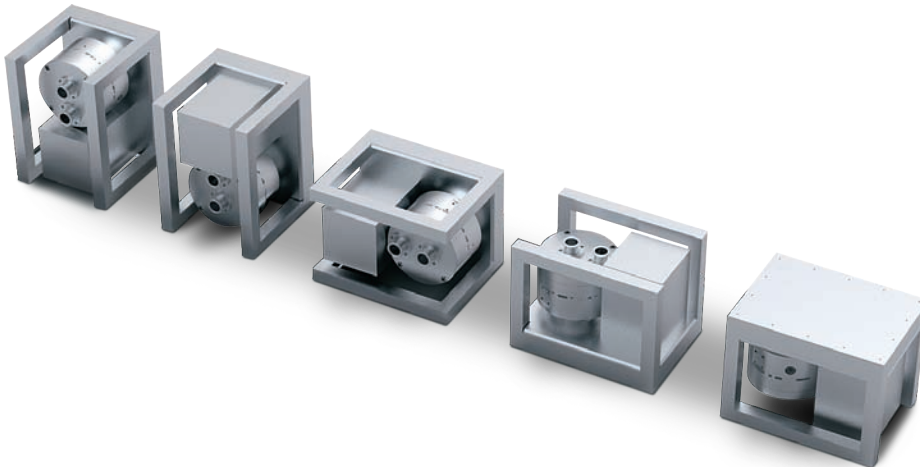


Power Box

- Plug & Play installation
- Protects system and pump from overpressure
- Configurable pressure switch setpoint
- Reset button for pump reset
- To be used with pressure switch (also available)

Diaphragm Sensor

- Sensor installed in ring drive unit
- Detection of all liquids
- Signal output to a controller, if diaphragm is ruptured



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