

New Multiple-Use Pump Size

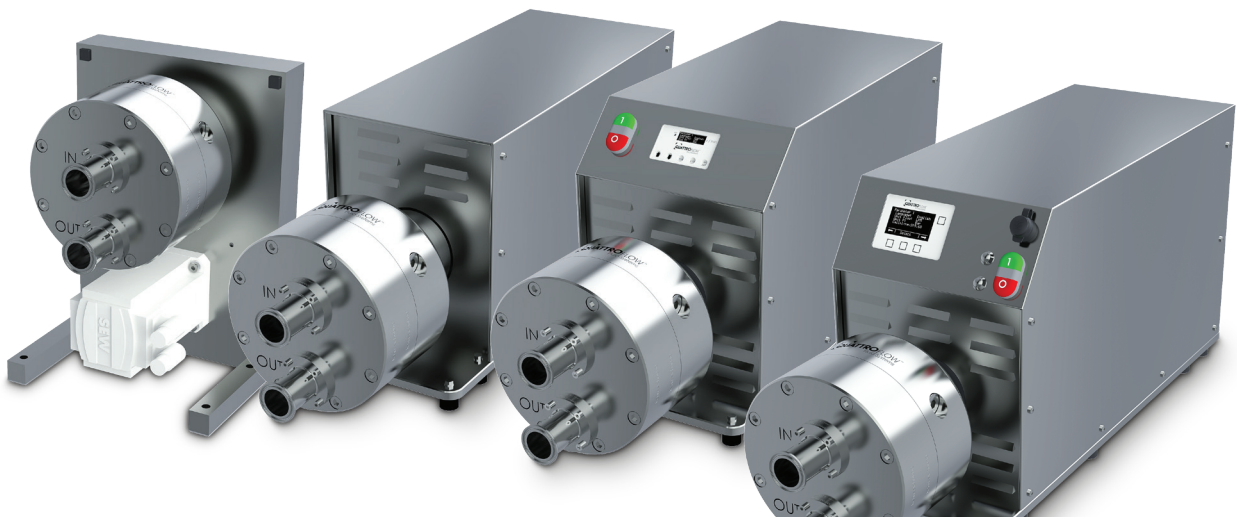
Quattroflow™ extends its next generation Quaternary (Four-Piston) Diaphragm Pumps with the new QF5k multiple-use offering, adding to the range for drainable and ventable technology.

Designed to achieve a flow rate between 50 and up to 6,000 lph, the next generation Quattroflow™ QF5k introduces improvements to critical functionality that the biopharma market demands.

Quattroflow multiple-use pumps now cover a flow capacity between 1 to 16,000 lph with multi-use pump sizes now available to meet the needs from small R&D projects to full-scale manufacturing environments.

Next generation QF5k pumps offer the following features and benefits:

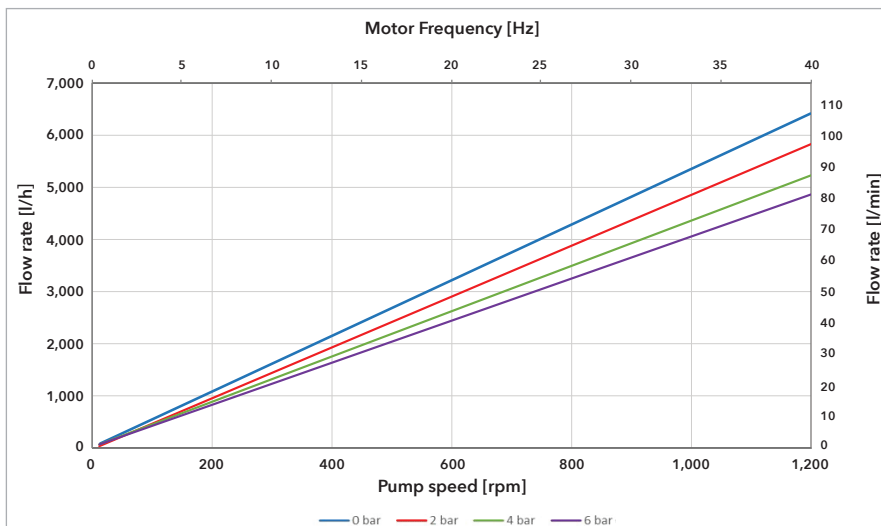
- Increased max. flow rate of 6,000 lph with most drives
- Clean-In-Place/Steaming-In-Place (CIP/SIP) and autoclavability
- Self-draining design to minimize non-recoverable product
- Enhanced venting to reduce the minimum flow rate required to remove entrapped air during priming
- Patented valve plate design to achieve self-draining and venting
- Up to 120:1 turndown ratio
- Improved linear flow performance
- High flow stability across entire flow range
- Available in several drive versions:
 - **AC version:** With 3 phase asynchronous motor
 - **Compact drive:** Minimal footprint due to "pump next to motor" design
 - **HT drive:** Plug-and-play version with integrated motor controller and keypad
 - **Q-Control:** Integrated pump controller with direct sensor connection
- Diaphragm monitoring available as option
- Motor flange design to reduce pump noise and simplify coupling alignment
- Typical applications include: Chromatography, TFF, virus filtration, sterile filtration, depth filtration



Technical Data QF5kMU

Description	Unit	QF5k	QF5k-HT	QF5k QCon	QF5kCD (compact design)
Flow Rate (5° cam)					
max.	l/h	6,000		5,000	
min.	l/h	200	50		
Max. Discharge Pressure (depending on media temperature)					
< 40°C	bar	6 (4 continuously)			
> 40°C	bar	4			
Max. Media Temperature					
Process	°C	80 (short-term)			
CIP	°C	90 (short-term)			
SIP	°C	130			
Autoclave	°C	130			
Pump Speed Range	RPM	30-1,200	13-1,200	13-1,050	
Dry Suction Lift					
Height	m	2 at 1,000 RPM			
Volume Specifications					
Approximated Volume per Revolution at Free Output	ml	91			
Approximated Filling Volume Without Connectors	ml	~788			
Product Wetted Materials (standard):					
Pump Chamber		1.4435 (316L)			
Valve Plate		1.4435 (316L)			
Diaphragms		TPE			
Valves		EPDM			
O-Rings		EPDM			
Connection Specification (standard)					
Connectors	inch	1.5" TC			
Position of Connectors		Front			

Description	Unit	QF5k	QF5k-HT	QF5k QCon	QF5kCD (compact design)
Pump Dimension with Motor and Housing:					
Length	mm	872	851	950	261
Width	mm	257	281	281	320
Height	mm	333	385	405	410
Pump Weight with Motor and Housing	kg	95	110	115	70
IP-Protection Class (total pump)	IP	55	54	54	55
Operating Temperature	°C	-20 to 40		10 to 30	
Certificates/Proofs (Optional)					
Elastomers (product wetted)		USP <87>, USP <88> Cl. VI; FDA21CFR177; BSE/TSE Safe			
Stainless Steel Parts (product wetted)		3.1; Surface Roughness; Ferrite Content			
Motor:					
Type		AC	Servo		
Frequency Inverter		Not Included (optional)	Integrated		Not Included (optional)
Rated Speed	RPM	1,435 (50 Hz)	3,000		3,000
Voltage	V	230/400	230	400	230 400
Current	A	7.7/4.4	23.5	13.4	23.5 13.4
Pump Controls					
Keypad/Controls		Not Included	HT-Panel	Q-Control	Not Included
Manual Speed Setting		■	■	■	■
Direct Sensor Connection		■	■	■	■
PID Control		■	■	■	■
Alarm Function		■	■	■	■
Analog Input		Over Frequency Inverter	4-20 mA (standard) 0-10 V (optional)	4-20 mA 0-10 V	Over Frequency Inverter



Data from QF5k-HT or QF5k-QCon drive respectively